National Defence
Défense nationale

B-GL-357-001/FP-001

# LAND FORCE INFORMATION OPERATIONS

# INTELLIGENCE FIELD MANUAL

## (ENGLISH)

**WARNING**

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**(Effective upon receipt)**

**Issued on Authority of the Chief of the Land Staff**

**OPI: DAD 5** **2000-09-01**

Canada

# FOREWORD

1. This manual must be read in conjunction with CFP 300 Canada's Army, CFP 300-1 Conduct of Land Operations, CFP 300-2 Land Force Tactical Doctrine and especially CFP 300-5 Information Operations and CFP 352-1 Intelligence, Surveillance, Target Acquisition and Reconnaissance. Within Information Operations (IO), the conduct of intelligence operations and the scope of the intelligence problem will vary according to the spectrum of conflict and the continuum of operations. Note that this manual does not address domestic operation issues. Specific guidance regarding the intelligence resources of the Canadian Forces for employment in domestic operations has been promulgated in the NDHQ Instruction DCDS Directive 2/98. Suffice it to say that, in accordance with "a specific legal mandate and direction issued by CDS",[1] the intelligence process will be the same and may be applied according to certain principles. The operation of an intelligence system is cyclic in nature. It progresses from a commander's direction to collect information and intelligence, processing these in light of the Commander's requirements and finally disseminating intelligence (see Chapter 2 The Intelligence Cycle).

2. This publication focuses on what has commonly been termed "combat intelligence", and the inter-relationships which other categories of intelligence have on combat intelligence. Additionally the manual will illustrate the links of the Intelligence Preparation of the Battlefield (IPB) process to support the Operation Planning Procedure (OPP) and the Commander's decision cycle. Therefore, it is placed in the context of higher formation tactics at Division and Corps but applies equally at lower levels of command.

3. Canadian Land Forces will rarely operate in isolation and commanders will need to plan for joint operations. Accordingly, while joint planning is normally conducted by higher headquarters such as Corps or Echelons Above Corps, intelligence staffs and line units at Division, Brigade and, potentially, Battle Group will have to consider intelligence support as received from other services, joint and national level capabilities during planning and operations.

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[1] See 3301-0 (DCDS) dated 10 July 98 DCDS 2/98 **Guidance for the Conduct of Domestic Operations**, paragraph 75, page 20.

4. Given the potential for coalition operations with larger, allied formations, as well as operations with the Air and Maritime forces, the context in which Land Force combat intelligence occurs will require an understanding of intelligence in joint and combined operations.

5. While this manual is in effect, the LF will be fielding new communications and $C^2$ systems. These systems will revolutionize the intelligence process, especially in terms of the Commander's view of the battlefield and subsequent priority intelligence and information requirements, sensor integration and reporting, analytical tools, access to data bases, and methods of dissemination. Throughout the transition, intelligence personnel must endeavour to ensure that the intelligence process remains dynamic, focussed and holistic in nature. In this light, this manual should be viewed as a record of the status quo.

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# CHAPTER 1
# GENERAL INTELLIGENCE SUPPORT

*The difficulty in the last war was that we were at the end of an epoch, and the difficulty today is that we are at the beginning of another.*

**Major General J.F.C. Fuller, Armoured Warfare 1943**

## SECTION 1
## INTELLIGENCE STAFF PROCESSES

### INTRODUCTION

1. Intelligence, as an activity, is a core competency within the realm of Information Operations (IO) and the central co-ordinating function in the Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) system of systems. Collectively, Information Operations (IO) form a combat function and are defined in CFP 300-1 as,

> continuous military operations within the Military Information Environment that enable, enhance, and protect the Commander's decision making cycle and mission execution to achieve an information advantage across the full range of military operations. They include interacting with the Global Information Environment and exploiting or attacking an adversary's information and decision systems.

2. A commander will have Commander's Critical Information Requirements (CCIRs). These will be satisfied by the provision of information pertaining to friendly forces, the adversary and the physical environment. IO is mandated to provide a commander with relevant information (RI) processed from the available mass of expanding data in order to provide situational awareness (SA) as a basis upon which a commander can establish battlefield vision (BV). RI is a refined product, although it is not provided merely for its own sake. Intelligence personnel,

as part of staffs and line units, produce intelligence in in order to aid a commander to make timely decisions and get inside the decision cycle of his adversary . The Intelligence Preparation of the Battlefield(IPB) process is critically dependent upon RI and in turn provides key inputs to the overall Operational Planning Process(OPP).

3. Every profession has a language of its own, and the terms associated with intelligence must be understood before related concepts can be applied. There is a clear need to fully understand definitions, and the inter-relationship of various terms, before proceeding to explore the environment, techniques and speciality areas of intelligence work.

## INFORMATION AND INTELLIGENCE

4. The NATO Glossary (AAP-6) defines information as: *Unprocessed data of every description which may be used in the production of intelligence.* Canadian army doctrine uses the NATO definition of information and, as noted above, information is an essential commodity for the planning and execution of all operations and activities. Intelligence, as described in the NATO Glossary is: *The product resulting from the processing of information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential operations. The term is also applied to the activity which results in the product and to the organizations engaged in such activity.* In fitting the agreed NATO definition of intelligence into the framework of new Canadian army doctrine, we state that intelligence, as a product, is a key subset of RI that provides knowledge of the adversary, weather and terrain.

5. In this regard it is important to understand that intelligence contributes to the overall tactical Common Operating Picture(COP) with adversary Situational Awareness (SA), normally called Red SA and Environmental Vision (EV) or Brown SA. Within an area of operations or theatre there could also exist neutral elements that could be portrayed as Green SA. SA should be quite flexible in application, although Blue(Friendly), Red and Brown SA are the norm. Red and Brown SA are achieved through the co-ordination of Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) systems and the integration by all source fusion or processing of the information[2], provided by the ISTAR

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[2] NATO AAP-6U refers to this as *combat information.*

systems. Intelligence is a key element of operations and an important component of decision-making. It enables commanders to successfully plan and conduct operations, identify critical targets, and win decisive battles. By expertly using the terrain and weather to advantage, and by effectively employing fire and manoeuvre , commanders can overcome adversity and successfully defeat more powerful adversaries.

## INTELLIGENCE IN THE INFORMATION AGE

6. In the past, Canadian doctrine attempted to divide intelligence into distinct strategic and tactical realms and apply value judgements as to which was more important. Much of the "divide" was due to limitations in information technology, which affected timeliness and security. In today's information culture, the technical barriers to the movement of information are disappearing. Strategic intelligence materials are available and strategic intelligence (read national) level sources, agencies and methods are readily able to support lower levels of tactical command. This capability underpins Canadian doctrine of mission command and interoperability with allies. In any case, the data, materials, information, and single source intelligence acquired through deployed army and joint ISTAR systems are processed according to the same methods and principles as at national level. When using the term intelligence in this manual the intent is to focus on the application of this competency within a deployed army field command or regional headquarters. Nonetheless, the concepts and methods may be considered to be fully applicable to a joint command at least where the army has the lead.

7. The ISTAR system of systems must be capable of detecting, locating and identifying adversary combat forces. The identification and location of adversary centre(s) of gravity, critical nodes, main axes, second echelons and weapons of mass destruction will be of prime importance. At the other end of the spectrum of conflict the ISTAR system must identify and locate key personalities and individual operatives, critical centres of activity, operating cells and/or groups. The protection of friendly formations from the consequences of adversary surveillance will also be a high priority.

## INTELLIGENCE IN OPERATIONS

8. Intelligence is the sum of our knowledge and understanding of the environment in which military activities are conducted. This includes not only knowledge pertaining to the activities, capabilities and intentions of an actual or potential adversary, but to belligerent parties during Peace Support Operations (PSO), "neutral sympathisers" of both the foregoing and to the physical environment where the military force is expected to achieve its mission as well.

9. The word "intelligence" is also applied to the various types of reports and briefings which transmit knowledge of the adversary and the environment to commanders, operational planners, intelligence specialists, and others who can derive benefit from such knowledge.

10. Intelligence is the product resulting from the processing of information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential operations. The term is also applied to the activity that results in the product and to the organizations engaged in such activity

11. Generally sensor, military or tactical information is merely a collection of unrelated data or information, such as the presence of adversary tanks in a village and increased refugee movements from a particular area. This information may be true or false, accurate or inaccurate, confirmed or unconfirmed, new or corroborative, pertinent or not pertinent, and positive or negative. When this data and information is checked for accuracy, grouped with other facts, and interpreted to discover underlying causes, circumstances, and its predicted implication, intelligence is created. This process of converting data and information to intelligence is covered during the examination of the intelligence cycle.

## INTELLIGENCE SUPPORT TO INFORMATION OPERATIONS

12. IO are pervasive and, as explained in B-GL-300-005 *Information Operations*, will occur in both offensive and defensive postures. Intelligence and ISTAR will be conducted to the same degree and scope; in effect being pervasive, continuous and as described in chapter 2, cyclical in terms of planning and execution.

13. Intelligence, and ISTAR, will be applied to support other components of Info Ops, just as they are applied to support the Commander in the functions of command, manoeuvre, fire power, protection and sustainment. Within IO, intelligence and ISTAR will support the following components:

a. Psychological Operations (PSYOPS), and

b. Deception.

## PSYCHOLOGICAL OPERATIONS AND DECEPTION

14. PSYOPS are described in B-GL-353-001/FP-001.[3] The role of intelligence in supporting PSYOPS is founded mostly in Human Intelligence (HUMINT) although the entire ISTAR array will be useful in determining the means and method of PSYOPS approach and in effecting the adjustment of a PSYOPS campaign.

15. Generally, intelligence and ISTAR will detect the shifts and adjustments in an adversary's deployment that might perhaps indicate his response and reaction to PSYOPS and deception measures. Similarly, Counter Intelligence (CI) will detect changes in the adversary's ISTAR array perhaps due to the same factors.

16. HUMINT is critical to PSYOPS specifically in terms of initially identifying the vulnerabilities of the target audience. Similarly, HUMINT will often reveal the effects of PSYOPS because it will detect attitude shifts among the targeted adversary personnel.

## TYPES OF INTELLIGENCE

17. There are two types of intelligence:

a. **Basic Intelligence**. Basic intelligence is the intelligence derived from background material (ie basic information) on any subject which can be used in the planning of operations and as a basis for evaluating new information or intelligence. It can be permanent or semi-permanent; and

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[3] B-GL-353-001/FP-001 *Psychological Operations*. (To be written.)

b. **Current Intelligence**. Current intelligence is derived from recently produced material relating to the current situation and events.

## CATEGORIES OF INTELLIGENCE

18. Each of the following Land Force-related categories of intelligence contains elements of basic and current intelligence:

a. **Acoustic Intelligence**. Acoustic intelligence (ACINT) is the intelligence derived from the collection and analysis of acoustic phenomena. Sensors may passively intercept radiated noise, or actively transmit sound pulses and receive the echo;

b. **Combat Intelligence**. Combat intelligence is that intelligence concerning the adversary, weather and terrain required by a commander in the planning and conduct of combat operations. Essentially it is limited to a consideration of these factors within bounds of a commander's area of interest;

c. **Communications Intelligence** . Communications intelligence (COMINT) is intelligence derived from electromagnetic (EM) communications and communications systems by other than intended recipients;

d. **Counter Intelligence** . CI consists of those intelligence activities related to assessing own force vulnerabilities to an adversary's intelligence capabilities, such as an ISTAR array and in neutralising those vulnerabilities. CI is responsive to security intelligence (SECINT) and intelligence, and supports operational security (OPSEC);

e. **Electronic Intelligence**. Electronic intelligence (ELINT) is intelligence derived from EM and non-communication transmissions by other than intended recipients;

f. **Human Intelligence** . HUMINT is a category of intelligence derived from information collected from and provided by human sources;

g. **Imagery Intelligence**. Imagery intelligence (IMINT) is intelligence derived from imagery acquired by photographic, radar, electro-optical, infra-red, thermal and multi-spectral sensors, which can be ground-based, seaborne or carried by overhead platforms;

h. **Measurement and Signature Intelligence**. Measurement and signature intelligence (MASINT) is scientific and technical intelligence obtained by the qualitative analysis of data (metric, angle, spatial, wavelength, time dependence, modulation, etc). MASINT is derived from specific technical sensors for the purpose of identifying any distinctive features associated with the source, emitter, or sender and to facilitate subsequent identification and/or measurement of the same. MASINT includes other intelligence sources and methods such as ACINT, laser intelligence (LASINT), and nuclear intelligence (NUCINT);

i. **Military Intelligence**. Military intelligence encompasses combat intelligence, strategic intelligence, and counter-intelligence as large, functional areas. In the information age, there may be a blurring of intelligence sources, products and lines of connectivity, however it is the point of application that is important. These functional areas areessential to the preparation and execution of military policies, plans and operations by providing a basis for determining;

(1) the timing and length of anticipated operations;

(2) combat strengths required;

(3) tasked organizations;

(4) combat support and combat service support requirements, and

(5) actions and reactions of allies, neutrals, neighbours and friendly elements;

j. **Security Intelligence.** Security Intelligence (SI) is intelligence specifically relating to the identity, capabilities and intentions of adversary organizations or individuals who are, or may be, engaged in espionage, sabotage, subversion, terrorism, and related crime. Counter-intelligence activities are undertaken to counteract the threat to security. As such, SI should be thought of as an intelligence product rather than an organization, agency or process.

k. **Signals Intelligence.** Signals intelligence (SIGINT) is the generic term used to describe COMINT and ELINT when there is no requirement to differentiate between these two categories of intelligence, or to represent fusion of the two;

l. **Strategic Intelligence.** Strategic Intelligence (STRATINT) is intelligence which is required for the formation of policy and military plans at national and international levels;

m. **Tactical Intelligence.** TACINT is the intelligence which is required for the planning and conduct of tactical operations;

n. **Target Intelligence.** Target intelligence is intelligence which portrays and locates the components of a target or target complex. The vulnerability and relative importance of targets associated with target intelligence is developed through the Target Acquisition (TA)process; and

o. **Technical Intelligence.** Technical Intelligence (TECHINT) is intelligence concerning foreign technological developments, and the performance and operational capabilities of foreign material, which have or may eventually have a practical application for military purposes. It is associated with scientific intelligence at the national level.

## THE COMBAT INTELLIGENCE-STRATEGIC INTELLIGENCE RELATIONSHIP

19. The distinctions between combat intelligence and strategic intelligence in a deployed command are essentially differences in scope and point of view. Combat intelligence in a deployed command is concerned primarily with that specific military operation and is normally generated from within, whereas strategic intelligence is more intended to support defence planning at the national and international levels. Both are required to provide a complete picture of adversarial activities to a deployed command. The difference lies in their intended usage, whether the product is to be used to gain a tactical advantage or to provide an estimate as to an adversary nation's ability to wage war.

20. Strategic intelligence staffs produce products related to various fields of study, including geography, transportation, telecommunications, sociology, politics, economics, science, and foreign armed forces. The following products, in particular, are useful to deployed intelligence staffs and units:

a. maps, charts and related data;

b. descriptions and studies of beaches, ports, rivers, towns terrain features and related analysis;

c. studies of transportation and communication systems;

d. data on trafficability, climate and hydrography;

e. political, sociological and economic assessments; and

f. order of battle (ORBAT) assessments on foreign armies, navies and air forces.[4]

## SECTION 2
## THE OPERATIONAL CONTEXT

### GENERAL

21. In general, intelligence staffs must monitor and assess the capabilities and operation of adversary manoeuvre, firepower, and information operations systems, and how these are supported by the adversary's protection and sustainment systems. In developing an understanding of adversary functional operations in a given area of operations it becomes possible to predict the adversary's intentions.

22. Intelligence staffs are required to develop detailed knowledge of the threats and conditions that exist for the particular mission. Maximum use will be made of open and classified data banks, local agencies and advanced information collection systems, such as satellite surveillance, to supplement normal combat information gathering means.

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[4] Note, however, that the draft STANAG 2077-**INTELLIGENCE RECORDS**, dated 30 March 1999, in Part 2 sets out a standardized policy and format for the recording and exchange of ORBAT information that is to be applicable at all levels of command.

23. An effective ISTAR system, through the intelligence it provides, greatly contributes to success in operations across the potential spectrum of conflict. For success, ISTAR operations require effective command direction, staff planning and co-ordination, combined with the appropriate technical and human sensors and a sophisticated predictive all-source analytical capability. Operational success will be directly proportional to the timeliness and effectiveness of the RSA and BV provided to a commander. One of the keys to this success will be the effective interaction between intelligence and collection resources within ISTAR.

## INTERNATIONAL PEACE SUPPORT OPERATIONS

24. PSO are military operations conducted for the purpose of restoring and, or maintaining peace, other than by the application of force except under extreme circumstances. There is a direct role for intelligence in PSO and operational planning for PSO must include the full range of all pertinent intelligence available.

25. PSO include such activities as cease-fire supervision, withdrawals and disengagement of opposing forces, maintenance of law and order and supervision of free territory up to and including enforcement measures. Prior to deployment, it is to be expected that there will be a significant demand on intelligence staffs to assist in the orientation and training of the deploying forces as well as in the operational planning of the mission.

26. Intelligence produced within PSO relies heavily on observation of events through patrols, observation poststechnical surveillance, liaison with non-government organizations (NGOs), and assistance from the intelligence resources of allied forces. As well, a wide range of pertinent information is collected from human sources and rendered into HUMINT. Military requirements for accurate and timely intelligence are the same as elsewhere in the spectrum of conflict and in the continuum of operations. They differ in that collection of information and processing it into intelligence may be politically restricted. Intelligence acquired must be guarded from both or all belligerent parties to a dispute to ensure that neutrality of the peace support force is not compromised and the consent of the parties in the conflict is maintained and fostered. In addition, there may be some restrictions in terms of interaction and releasability within the PSO itself.

27. Aside from various restrictions, intelligence staffs must be cognizant of the tactical, operational, and strategic-level products available

and exploit them accordingly. In particular, in a multi-national PSO environment a multitude of intelligence products will be generated by the forces in theatre, while tactical intelligence subject matter will undoubtedly be much more varied and diverse than conventional operations. Suffice to say the complexity of a PSO environment presents a significant challenge to intelligence staffs at all levels.

## SECTION 3
## PRINCIPLES AND TERMS

### GENERAL

28. Intelligence, an inseparable part of the battle procedure process(and OPP), provides the basis for making decisions, planning activities, establishing security measures, conducting military operations, and anticipating future developments so that requirements can be forecasted.

29. The objective of intelligence staffs is to minimise the uncertainties of the effects of the adversary, weather, and terrain on operations through effective collection management and thorough processing of all relevant data, and the rapid dissemination of timely, relevant intelligence.

### PRINCIPLES

30. The eight basic principles which govern the function, organization and operation of the combat intelligence system, from Battle Group through to corps level, are:

a. **Centralised Control**. Intelligence is centrally controlled to avoid unnecessary duplication, provide mutual support, and ensure the efficient, economic use of all resources;

b. **Timeliness**. The most accurate and reliable information or intelligence is useless if it arrives too late. Information collection, processing and dissemination are to be quickly and efficiently conducted. In fast-breaking situations, combat information rather than combat intelligence may be disseminated to ensure that troops in contact and other intelligence staffs are aware of breaking developments;

c. **Systematic Exploitation**. Sources and agencies are systematically exploited by methodical tasking based on a thorough knowledge of their capabilities and limitations;

d. **Objectivity**. Any temptation to distort information to fit a pre-conceived notion or idea is resisted;

e. **Accessibility**. RI and specifically intelligence are made readily available to commanders, operation staffs, intelligence staffs and other users. Intelligence is of no value if it is neither disseminated nor accessible to those who require it;

f. **Responsiveness**. The intelligence system of systems must effectively respond to the Commander's decision cycle;

g. **Source Protection**. All sources of information must be adequately protected; and

h. **Continuous Review**. Intelligence is continuously reviewed, and where necessary revised, taking into account all new information received.

## PRECEPTS

31. There are certain precepts that serve as fundamental truths, if not principles, of intelligence work at all tactical levels.

a. **Accountability**. Intelligence personnel and the intelligence system in its entirety must have the confidence of commanders and staffs. The intelligence staff officer, who has direct access to the Commander on intelligence matters, must possess the attributes of a military leader. Additionally, to be effective, the intelligence officer requires expert knowledge and experience of the intelligence system of systems—at the tactical, operational, and strategic levels. The officer must have a thorough knowledge of the following:

(1) the information collection capabilities and limitations of available sources and agencies;

(2) the intelligence systems and external agencies which can be called upon for specialist or higher-level support;

(3) the technical capabilities and limitations of information processing and dissemination technologies; and

(4) the training and development of the intelligence personnel relied upon to manage information collection, process information received, and disseminate intelligence products.

b. **Efficient Use of Staff**. The success of the intelligence system at any level rests in large measure on the ability of all members of the intelligence staff to ensure that their activities meet the needs of the Commander. For their part, commanders and operations staffs ensure the intelligence staff, and thus the intelligence system, are properly employed and directed.

c. **Operational Focus**. The intelligence staff functions as a cohesive team, ensuring that all aspects of the intelligence function are focused on PIRs, IRs, and Requests For Information (RFI). By analysing the Commander's operations concept, the intelligence staff also anticipates future requirements for intelligence. The technical advances concomitant with the emergence of IO has enabled certain measures and means to support mission command and manoeuvre operations;

d. **Command Driven**. Commanders will establish CCIRs within which there will be PIRs.[5] Linked directly to the principle of **centralised control**, the aim of command-driven intelligence is to ensure the definition of PIRs and high value targets in sufficient detail in time and space to focus the intelligence system at all levels of command;

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[5] See Chapter 2 for further explanation of CCIR and PIR.

e. **Synchronisation.** Intelligence staff and line personnel, acting on the principles of timeliness and systematic exploitation must drive the entire intelligence cycle within the operational context. They must also understand the capabilities and limitations of the intelligence resources, national and allied, strategic to tactical, and appreciate in unfolding situations how they are best integrated to support the rapidly changing requirements of modern area of operations. Information collection, processing and dissemination must be quickly and efficiently conducted;

f. **Split-Based Operations**. In order to ensure that all possible sources and agencies are systematically exploited, the intelligence system must maintain integrity of information flow in all stages of deployment and operations. This provides a challenge to intelligence organizations before and during deployments. Intelligence support to an operation may have to be split in terms of location for a period of time. As such, some intelligence functions or resources may be deployed elsewhere within the area of operations or within the theatre. However, all the resources share the same command and control relationship (e.g., under command). This forms the basis of split-based operations. It does not include intelligence resources that may provide support but operate under a different command and control relationship (e.g., strategic intelligence support to deployed forces).

g. **Tactical Tailoring**. In accordance with the principle of responsiveness, the intelligence system is at all times responsive to the Commander's PIRs. This includes the provision of personnel and equipment as the nature of missions and deployments tends to change as situations unfold; and

h. **Broadcast Intelligence.** Relevant information and intelligence are made readily available to intelligence staffs and to other users. Intelligence, to be true to the principle of accessibility, is of no value if it is neither disseminated nor accessible to those who require it. In the realm of IO this means the directed down link and broadcast of raw data and the smart push of intelligence products. In turn, 'consumers' of information and intelligence must be able to access the intelligence products and databases in a 'smart pull' mode.

32. **"Single-Source" Versus "All-Source" Analysis**. Intelligence staffs ensure that combat information is transmitted swiftly to those in immediate need of it, while concurrently being processed by the intelligence staff or line unit personnel. This desire to keep information users immediately abreast of developments, however, has certain risks. Information may be inaccurate, either through operator error (misinformation) or by deliberate deception (disinformation) on the part of the adversary. The risk of providing potentially wrong information needs to be weighed against the potential gain of having the correct information in time to be used.

33. As an example, a SIGINT report could be received that an adversary tank battalion is concentrated in a particular wood and is preparing to break-through forward defences at a particular location. If this report is immediately accepted as valid, without corroborating reports from other IMINT and HUMINT sources, the G2 staff will have conducted "single-source" analysis. It is much preferable for the G2 staff to then request an IMINT report of tank tracks around the particular wood. In addition, or if there is no imagery, check HUMINT reports from sources who could have seen or heard tanks in the particular wood. Then the G2 is in a much better position to make deductions which could lead to the commitment of the formation's counter-move force.

34. **Information, Misinformation, and Disinformation**. A distinction is made between the following terms:

a. **Information**. Information is processed data of every description which can be used in the production of intelligence. For example, this could mean sensor data that has been integrated with other sensor data before being transmitted onwards as information;

b. **Misinformation**. Misinformation is erroneous data or information that is introduced into the intelligence processing system by sources who wrongly believe the data to be correct; and

c. **Disinformation**. Disinformation is erroneous data or information purposely introduced into the intelligence processing system by hostile intelligence agencies, groups or individuals whose interest is to deceive intelligence staffs and lead commanders to decisions that serve the interest of the adversary force.

35. **Intelligence in the Realm of Information Operations**. Intelligence methodology continues to evolve. Part of this evolution includes:

a. **Increasing Automation**. Information collection, handling and dissemination continue to be increasingly automated, in the quest to provide intelligence in the most timely and efficient manner;

b. **Information "Pull-System"**. Intelligence products and reports of every description are directed into centralised "information pools." Intelligence staffs can draw the intelligence and information desired to satisfy particular needs, rather than cope with massive amounts of non-essential and undesired information in the era of "information overload";

c. **Ready Access**. Operations staffs are increasingly able to access raw information and intelligence through available information systems;

d. **Source Multitude**. Numerous sources unavailable to intelligence staffs in the past are now available to intelligence and operations staffs. These include the Internet, commercial analysis firms, private consultants, and so forth; and

e. **Remote Processing**. The capability to process information from distant locations is available through technological advances enabling split-based intelligence operations.

36. **Given these positive developments**:

a. the tendency must be avoided to view intelligence as "machine-produced" or not needing specialist input;

b. the belief that one particular source can effectively provide all the intelligence support commanders in-theatre require must be guarded against; and

c. intelligence staffs must ensure that operations staffs receive the support they require, and be aware of the pitfalls of operations staffs performing their own intelligence work. This can occur in an environment where intelligence has become reactive rather than predictive in content.

37. For the intelligence system of systems to perform effectively, intelligence personnel need to develop a proper appreciation of developments which only a presence on the ground can provide:

a. intelligence must continue to be viewed as a specialist endeavour, involving the human analysis of multi-source reporting and using the most modern technological information collection, processing and dissemination equipment available;

b. intelligence specialists must ensure that information reports and intelligence products drawn from various information and intelligence environments are tailored to meet the specific operational requirements of their commanders; and

c. intelligence staffs must continue to serve alongside their operations staff counter-parts in-theatre if intelligence personnel are to develop a proper appreciation of developments and ensure that intelligence remains predictive in nature.

# SECTION 4
# BATTLEFIELD FRAMEWORK

## GENERAL

38. Commanders consider the battlefield in terms of space, time, resources and purpose. They assign areas of influence and interest to their subordinate commanders. The battlefield is viewed as having height, width and depth, and commanders at all levels must consider conducting **deep, close and rear** operations during planning. Deep and close operations may be conducted concurrently. In order to provide the best possible SA, intelligence staffs must think and operate within the same conceptual framework.[6]

39. **Area of Operations**. An Area of Operations (AO) defines geographic limits and a volume of space within which a commander will conduct operations. Throughout the AO, commanders are responsible for the security measures required to protect their forces and operations.

40. **Area of Intelligence Responsibility.** The area of intelligence responsibility (AIR) is the area allocated to a commander, in which the Commander is responsible for the provision of intelligence, within available means. (AAP-6U) This area is within a commander's AO and may extend beyond organic weapons engagement range, especially in Operations Other Than War (OOTW). The AIR may be assigned to the Commander by virtue of the capability of organic collection systems to fulfil the higher commander's PIR.

41. **Influence and Interest**. Associated with this AO, commanders and their intelligence staffs have areas of influence and interest.

42. **Area of Influence.** The area within which a commander engages the adversary directly is known as the Area of Influence. It is also within this area that intelligence operations including surveillance, TA and reconnaissance are conducted.

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[6] For further information on Deep, Close and Rear operations, see B-GL-300-002/FP-000, Chap 1.

43. **Area of Interest.** The Area of Interest (AI) of each command level is defined as the area of concern to the Commander, including the area of influence, areas adjacent thereto, and extending into adversary territory to the objectives of current or planned operations. This area also includes areas occupied by adversary forces, which could jeopardise the accomplishment of the mission. The physical definition of these areas will expand and contract during the course of an operation due the allocation of resources, losses in combat and terrain implications.

## BATTLEFIELD DIMENSIONS IN SPACE AND TIME

44. Areas of influence and interest are defined in terms of space and time. For example, a Corps commander normally plans up to 96 hours into the future. Thus, the Corps AI extends in time to those adversary forces that could potentially influence operations during the next four days.

45. An example of battlefield dimensions, which were considered typical in the NATO central region circa 1980 -89 are shown at Figure 1-1.

| | **Area of Influence (space)/Area of Interest (space/hrs)**[7] |
|---|---|
| Corps | 60 x 120km/180 x 250km (0-96 hrs) |
| Division | 30 x 50km/60 x 120km (0-72 hrs) |
| Brigade group | 15 x 15km/30 x 50km (0-48 hrs) |
| Battle group | 7 x 5 km/15 x 15 km (0-24 hrs) |

**Figure 1-1: Areas of Influence and Interest in space (width x depth) and time (forward of the Forward Edge of the Battle Area)**

46. **Manoeuvre Warfare**. In the era of manoeuvre warfare, areas of influence and interest have increased substantially, insofar as linear deployment is conducive to old cold war tactics. In manoeuvre warfare, deployment may be contiguous or non-contiguous in that formations and units may or may not be deployed independent of each other. In both cases, however, tactical objectives would be to determine the adversary's areas of

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[7] Time estimations are based on averaged speed over good terrain as per the Generic Enemy (Basic Forces) model at B-SJ-100-002

weakness and critical nodes so that they might be exploited and destroy the adversary's capability and will to fight.[8]

47. Intelligence staffs at all tactical levels must acquire information on the adversary within the formation/unit's area of interest however it is expressed in terms of space or time. It should be noted that in manoeuvre warfare, the Area of Interest will most likely be much larger than those depicted in Figure 1-1 and they will continue to grow in the future. In manoeuvre warfare, information collection is much more selective and targets specific Named Areas of Interest(NAI) and Target Areas of Interest(TAI).

### AREA OF INTELLIGENCE DATA MANAGEMENT AUTHORITY

48. This is the area delegated or assigned to an all-source cell in which it is fully or partly responsible for the production and dissemination of a defined part of the intelligence database.

## SECTION 5

## INTELLIGENCE RESPONSIBILITIES

### OPERATIONAL FOCUS

49. While it is the responsibility of commanders and their staffs to state their intelligence requirements, intelligence staffs at all levels have a responsibility to understand the mission and activities of their respective commanders in order to provide and anticipate the specific intelligence and information needed.

### CORPS

50. At Corps, identification and detection of adversary forces conducting major thrusts is required in the parameters established by a

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[8] For more information on Manoeuvre Warfare, see B-GL-300-002/FP-000, Chap 1.

commander. In particular, within 'warfighting' scenarios, intelligence is required on the:

a. locations, strengths, axes and rates of movement of major concentrations of armour, infantry, air defence units, artillery, and reserve formations;

b. location and movements of headquarters (HQs), weapons of mass destruction delivery means and stockpiles;

c. build-up and deployment of specialist forces and equipment, including airmobile forces, engineer and locating equipment, and logistic resources; and

d. location and activities of adversary reconnaissance and airmobile forces in rear areas.

## DIVISION

51. At division, intelligence is required to discover:

a. the location, strengths, axes and rates of movement of immediate reserves, depth formations, airmobile and armour forces, forces in contact and forces which have penetrated forward defences or on the move to stop our manoeuvre; and

b. the locations of short-range weapons of mass destruction delivery means, conventional artillery, bridges and ferry sites, HQs and communications centres, electronic warfare sub-systems, and reconnaissance sub-systems.

## BRIGADE GROUP/BRIGADE

52. Brigade Groups and Brigades require continuous intelligence on adversary forces to allow:

a. engagement of all high-value targets within the area of influence; and

b. build-up of the most complete picture possible of the adversary's organization, location and movements, particularly of second echelon units.

## BATTLE GROUP

53. Battle Groups require near-real time information and intelligence on targets within the unit's area of influence to allow prompt and accurate engagement by direct and indirect fire. Information and intelligence required on adversary units include the nature, strength, deployment, activities, main axes of movement, and rates of movement particularly of second echelon sub-units.

# CHAPTER 2
# THE INTELLIGENCE CYCLE

*No operational skill can compensate for those severe consequences which can occur out of neglect or the shortcomings of an intelligence service.*

**Marshal of the Soviet Union, Mikhail N. Tukhachevskiy (1893-1937)**

## SECTION 1
## INTRODUCTION

### GENERAL

1. **Definition**. The Intelligence Cycle is the sequence of activities whereby information is obtained, assembled, converted into intelligence, and made available to users.

2. The Intelligence Cycle concept is shown at Figure 2-1 including the four phases:

    a. Direction;

    b. Collection

    c. Processing, and

    d. Dissemination

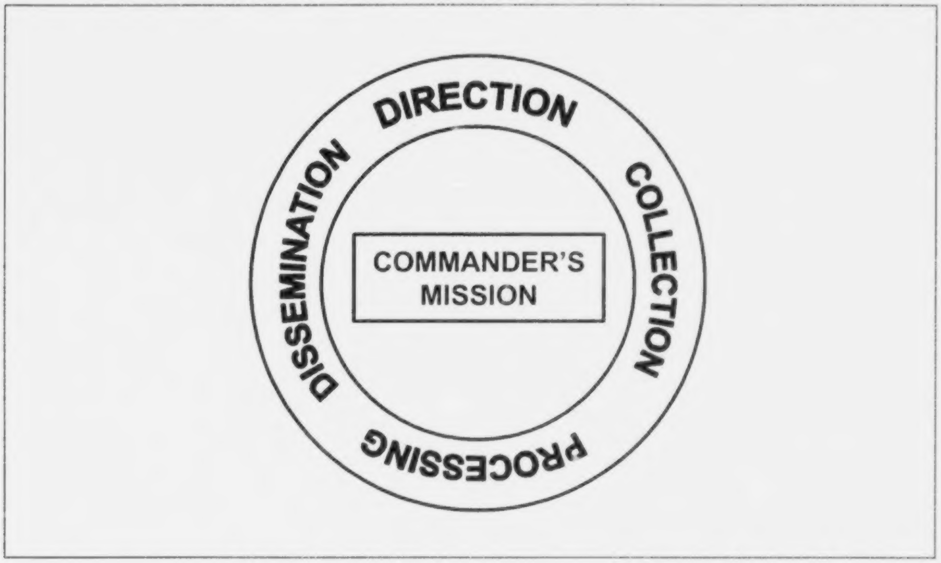

**Figure 2-1: The Intelligence Cycle**

3. **Description.** The sequence is cyclic in nature, and activities related to all four phases of the cycle occur concurrently. At the same time that information is being collected, previously obtained information is being processed, intelligence is being disseminated, and further direction is taking place. It should be noted that the Intelligence Process provides the intellectual forum within which intelligence is produced. The intelligence cycle comprises the methodology.

## SITUATIONAL AWARENESS AND TARGET DEVELOPMENT

4. The final goal of the Intelligence Cycle at the operational and tactical level is to produce intelligence for:

a. **Situational Awareness (SA)**. By describing adversary force locations, sizes, types, directions and rates of movement, and activities, intelligence staffs contribute to SA and enable commanders to understand the battlefield in sufficient time and detail to employ their forces and weapon systems effectively; and

b. **Target Development**. Target development is the process of providing timely and accurate locations of adversary High Value Targets (HVTs) and High Pay-off Targets

(HPTs), such as massed armour formations (movers), vital tactical communications facilities (emitters), artillery concentrations (shooters), and HQs or vital supply facilities (sitters) throughout a commander's area of influence. With this information, targets can be effectively attacked with fire, manoeuvre, or electronic warfare means.

5. Although distinct, situation awareness and target development are inter-related and totally integrated to provide an accurate portrayal of the battlefield environment. Both conditions are pursued simultaneously at all levels to support decision making.

## SECTION 2
## DIRECTION

### GENERAL

6. Direction occurs at three levels:

a. the Commander's direction to the intelligence staff to provide intelligence on matters of concern; and

b. staff direction to the formation intelligence unit establishing priorities in the collection, processing and dissemination of intelligence; and

c. direction to collectors via an Intelligence Annex to an Operations Order, a Collection Plan, an Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) Matrix, or even a simple Request for Information (RFI).

7. **Activities**. During the Direction phase:

a. intelligence and information requirements are determined;

b. sources and agencies are tasked to collect information; and

c. a continuous check on the productivity of collection sources and agencies is maintained.

8. **Focus of Effort**. Intelligence support is vital to the successful planning and execution of operations at all levels of command. Intelligence activities at Brigade Group and Battle Group normally focus onthe parameters of the mission, be it deep, close or rear operations.

## PRIORITY INTELLIGENCE REQUIREMENTS

9. During the Direction phase, the following requirements are identified, as logical extensions of the CCIRs:

a. **Intelligence Problem**. The intelligence problem, one of the CCIRs, is that aspect of over-arching situational awareness wherein the Commander must gain as full an understanding of the adversary, weather and terrain possible if the mission is to be successfully accomplished. From the intelligence problem, several PIRs are usually generated;

b. **Priority Intelligence Requirements**. PIRs are the intelligence requirements that the Commander has identified and stated as a critical need for operations planning. At a given juncture, a commander may provide these up front or the intelligence staff may suggest or include additional PIRs. PIRs are not static entities and may be refined and adjusted as operations develop. New PIRs will undoubtedly be created and the process is continuous throughout the duration of the operation. Nonetheless, the Commander approves all PIRs before they are used in the planning of the intelligence effort, and as the basis for tasking collectors. If the Commander does not assign PIRs, the G2 may assess the situation and recommend PIRs for approval. In most cases, the Commander and G2, along with the G3, will develop the PIRs together;

c. **Information Requirements (IRs)**. IRs are those items of information regarding the adversary and the environment which need to be collected and processed to answer PIRs, or to complete the intelligence picture more fully. IRs may be created at any time in the operation and are normally the result of interaction between the Commander, staff, and G2; and

d. **Combat Indicators**. Combat Indicators are the specific information requirements that are given to information collectors. They help to focus the collection effort and are multi-dimensional in terms of such things as time, space, activities, routine, doctrine and decision cycles. The answers provided by the information collectors are used to answer IRs.**Requests for Information**. RFI are specific information requests that may or may not directly relate to PIRs and IRs. Within NATO, RFI are becoming the standard format for requesting information at all levels. In an automated information environment, RFI facilitate rapid research across multi-level media and databases, specifically while researching a more general topic or PIR/IR. All information requests forwarded to an intelligence staff are numbered by the originator, and contain:

(1) description of the information required;

(2) remarks concerning priority of the request, or substantiation for requiring the intelligence staff and sources/agencies to devote effort toward providing the requested information; and

(3) details concerning the date-time by which the information is desired.

## ROLES

10. **Role of the Commander.** The Commander not only directs operations, but the information collection effort to support operations as well. In other words, **the Commander drives intelligence**. To assist the Commander in this effort, intelligence specialists provide advice and conduct the detailed staff work required to make the combat intelligence system function effectively.

11. To ensure that intelligence products are relevant to the Commander's needs the PIRs are communicated to the G2 staff and to all subordinate commanders and intelligence staffs, in some manner in the Commander's Operations Order

12. The Commander defines when information concerning PIRs must be provided. The time factor is critical, given that it influences what information sources can be tasked and what methods of dissemination can be used to convey finished intelligence to the Commander.

13. **Commanders also ensure that**:

   a. sufficient organic information gathering resources are dedicated to the information collection effort; and

   b. the efforts of the operations and intelligence staffs are synchronised, so that all staffs function together as a cohesive team.

14. The Commander is also responsible for directing appropriate CI measures to protect the security of information resources and operations.

15. **Role of G3**. G3, or the operations officer at unit level, is primarily concerned with the combat capability and readiness of friendly forces to conduct operations successfully.

16. The G3 has an important role to play in the Direction phase of the Intelligence Cycle. In particular, the G3:

   a. provides additional RFI to the G2 for inclusion in the Information Collection Plan (ICP); and

   b. tasks formation information collection resources that are not part of the intelligence infrastructure or network. For example, the operations staff tasks infantry units to send patrols, the observation squadron to conduct surveillance along flanks, and the reconnaissance squadron to patrol particular sectors. G3's involvement in the tasking process provides the needed centralised control over formation resources and ensures economy of effort.

17. **Role of G2.** G2, or the IO at unit level, is primarily concerned with the future activities of adversary forces and their ability to exploit the weather and terrain. The G2 is ultimately responsible for the functioning of the combat intelligence system and the provision of intelligence support to the Commander. In doing so, he helps the Commander to understand the battlefield or operation in terms of the decision cycle of the adversary commander.

18. After receiving direction from the Commander, the G2 provides direction to the intelligence staff so that a unified effort is made to provide the required intelligence for the operation. The G2 also develops IRs and Combat Indicators which form the basis of collection planning.

19. G2 direction to formation intelligence units is channelled through the formation's chief operations officer or chief of staff, depending on formation Standing Operational Procedures (SOPs).

## INTELLIGENCE BATTLE PROCEDURE

20. **Structural Guidelines**. Intelligence battle procedure is the process by which intelligence staffs at all levels prepare for battle..**The Operational Planning Process(**OPP) and Intelligence Preparation of the Battlefield(IPB) comprise integral portions of overall battle procedure(Decision/Action Cycle-see Anx A). As the requirement to act faster than the adversary can respond is of paramount importance, intelligence battle procedure is structured to:

   a. provide the Commander with intelligence support quickly;

   b. prepare fully and quickly the combat intelligence system for battle;

   c. allow flexibility to meet evolving situations and demands; and

   d. permit maximum integration with operations staff battle procedure.

21. **Requirements for Success**. The keys to success are:

a. anticipation;

b. early warning;

c. efficient drills, procedures and SOPs;

d. focussed, concurrent activity; and

e. the rapid development of relevant databases and effective exploitation of the Military Information Environment(MIE) and the Global Information Environment(GIE)

22. **Basic Intelligence Databases**. Basic intelligence databases are prepared in peacetime and continuously up-dated by the intelligence staffs of formations or units warned for possible involvement in a particular operation. The extent of databases and the depth of analysis are dictated by the potential area of operations, the type of mission involved, the ready availability of databases from other intelligence staffs and intelligence staff personnel to undertake database tasks.

## SEQUENCE OF INTELLIGENCE BATTLE PROCEDURE

23. After the Commander receives a Warning Order, intelligence battle procedure commences. The sequence of intelligence battle procedure synchronised with OPP is illustrated at Annex A.

24. **Identification of the Intelligence Problem and PIRs**. The threat, mission, and time and space parameters become known when the Commander receives his tasks from his superior commander. With these in mind, the Commander quickly assesses the situation and considers how the adversary can, or is likely to affect the mission. This becomes the basis for the intelligence problem and PIRs posed to the intelligence staff. Where there are several concurrent Intelligence Problems, the intelligence staff consider these in order of priority.

### PREPARATION OF THE INTELLIGENCE ESTIMATE

25. The preparation of an Intelligence Estimate would be to.

a. determine the options open to the adversary or potential adversary;

b. assess the likely order of their adoption; and

c. determine gaps in intelligence and information possessed by the intelligence staff.

26. The Intelligence Estimate differs from an Estimate of the Situation(Ops) in three respects:

a. much of the Intelligence Estimate is approached from the adversary's point of view. Consequently, a sound understanding of adversary tactics, strengths, habits and activity patterns is required to complete the Intelligence Estimate;

b. it may be assumed that the adversary commander has a reasonably good knowledge of friendly capabilities, intentions and vulnerabilities, but an assessment has to be made as to what the adversary commander may know and what gaps may be exploited; and

27. Separate Intelligence Estimates may have to be prepared for situations where the adversary aim remains unclear.

28. **Intelligence Estimate**. There are three choices in terms of the type of Intelligence Estimate to be produced:

a. **The Deliberate Intelligence Estimate**. Due to the nature of CF operations, it may be beneficial to conduct a deliberate Intelligence Estimate(written) wherein a theatre activation is to be initiated or the proposed area of operations is complex with regard to terrain, ethnicity or the environment(eg. urban ops).

b. **IPB Intelligence Estimate**. It may be advantageous for the G2 to capture the essence of the IPB process and disseminate it beyond his own HQ. The intelligence estimate is essentially a by-product of IPB and is normally desseminated as a graphical product. In the end, it is important to remember that the Intelligence Estimate is simply a useful by- product of the G2's IPB process and not the 'raison d'être'. At Brigade Group and Battle Group, a graphical Intelligence Estimate focusing on the effects of terrain on adversary options, as well as a higher level picture is normally sufficient ; and

c. **Combat Intelligence Estimate**. The Combat Intelligence Estimate is an abbreviated version of the Intelligence Estimate(to be used when there is little time available), and includes only the following elements:

(1) **Aim**. The adversary's aim, and the adversary force which may be employed to achieve it, are considered. This information is drawn from the Intelligence Estimate prepared by the G2 staff at the higher HQ. If the adversary is not reasonably defined, then an assessment of the worst case and best case capabilities and intentions of the opposing force based on adversary doctrinal frontages and tactics is made;

(2) **Ground**. By examining the trafficability afforded by the ground, the best approaches available to the adversary are revealed. The ground dominating these approaches must be neutralised, or captured by the adversary, to use corridors for open manoeuvre. By analysing the obvious approaches and dominating ground, the adversary's axes and objectives become evident. Analysis may include weather if it is significant enough to affect mobility and observation; and

(3) **Plan**. From the possible COAs available to the adversary, once one has separated the impossible from the possible, one would consider a range of options from least likely through most dangerous to friendly forces. Thereafter, the COA most likely to form an adversary's plan is stated in as much detail as possible. Deductions regarding the strengths, weaknesses and vulnerabilities in the adversary's plan(s) are stated for the benefit of operations planners.

d.

29. **Intelligence Planning**. Besides the Intelligence Estimate, the G2 staff prepare the following items:

a. **Information Collection Plan (ICP)**. The ICP is developed concurrently with all other activities;

b. **Intelligence Annex**. The Intelligence Annex is normally Annex C to an OpO, in which the G2 staff drafts the intelligence requirements[9]; and

c. **ISTAR Plan**. The ISTAR Plan[10] details the coverage and tasks of information collection resources. It normally consists of an **ISTAR** matrix and an ISTAROverlay that show the coverage of a formation's ISTAR array and may be issued as appendices to the Intelligence Annex or a separate ISTAR Annex[11]. In a situation where a Fragmentary Order (Frag O) is issued, an ISTAR Overlay may be the only timely option available for inclusion in the FragO.

30.

## COLLECTION MANAGEMENT

31. Collection management is the means by which intelligence integrates formation ISTAR effort. Collection management is a process of converting information and intelligence requirements into collection requirements, establishing or tasking appropriate collecting sources or agencies, monitoring results, and re-tasking sources and agencies as required. The co-ordination of information and combat surveillance operations prevents problems stemming from:

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[9] See FSOP 804.04.

[10] See example at Figure 2-37.

[11] See Anx C to Chap 2 for more information on the ISTAR Plan.

a. the different intelligence requirements of subordinate levels of command;

b. the overlap of information and intelligence requirements between command levels;

c. the interaction and interface of information sources on the battlefield; and

d. the need to match detected targets with the optimum mix of information sources to describe and exploit the targets.

32. **Responsibilities**. At Division and higher, the G2 Estimates is normally tasked with preparing the initial collection strategy and plan for each operation or phase of war. The G2 Plans is the information collection manager, responsible for implementing the collection plan by:

a. co-ordinating with HQ staff to determine information collection resource availability;

b. submitting information collection requests to the G3 and external intelligence staffs; and

c. co-ordinating the delivery of information from sources to the appropriate intelligence processing staff members or intelligence unit.

33. **Goals**. Through effective collection management:

a. a limited number of information collection resources is efficiently used against a large array of adversary movers, shooters, sitters and emitters; and

b. the accuracy of information received is confirmed by the use of substantiating information.

34. **Management**. A single, comprehensive plan is developed for each command level to manage information collection. The collection management process, which is referred to (in NATO) as Control Co-ordination Information Requirements Management. (CCIRM) is sub-divided into three functional aspects:

a. **Requirements Management**. Requirements Management translates the Commander's PIRs and IRs into specific information requirements, reflected in the formation ICP;

b. **Mission Management**. Mission management identifies and evaluates information collectors to fulfil the intelligence requirement. Once the availability, capability and limitations of collectors are assessed, the information collection manager considers current target signature assessments and determines which information collection source or agency is best suited for each individual information collection requirement; and

c. **Source/Sensor Management**. Formation and unit commanders select and direct integral information collection resources to fulfil identified or assigned information collection tasks. The proper selection of sources and sensors is accomplished by thorough knowledge of source/sensor availability, their location to the collection target, physical or technical abilities to collect, and the prioritisation of mission requirements. Multi-source collection co-ordination is required at each command level to integrate all collection means into a cohesive, mutually supporting, synergistic system. Liaison personnel from artillery intelligence, engineer intelligence, formation reconnaissance units, and electronic warfare (EW) elements assist in the co-ordination effort.

35. **Collection Management Stages**. Information collection management has three stages:

a. **Assessment of Requirements and Resources**. The assessment of RFI requirements and PIRs and the sources/agencies (resources) which can best provide the required information/intelligence;

b. **Preparation of the ICP**; including

(1) source/agency selection;

(2) source/agency tasking;

c. **Information Collection**. The timely delivery of collected information to intelligence staffs so that the information can be processed into finished intelligence; and

d. **Monitoring and Re-tasking**. As sources and agencies report information, the quality of reports is monitored, the ICP is up-dated, and sources/agencies are given new collection tasks.

## ASSESSMENT OF INFORMATION REQUIREMENTS

36. Once the intelligence staff has received and determined PIRs and IRs for an operation, the intelligence staff must assess whether requirements can be met from present data holdings. If not, it must be determined what additional intelligence is needed and what information is required to produce that intelligence.

37. Although many IRs are established during the Intelligence Estimate process, many new IRs are added as new questions come to light once information begins to be received. IRs may also be received from higher, lower and flanking HQs.

38. **Requirement Assessment Steps**:

a. **Logged/Numbered**. Each is numbered and entered in an electronic log book so that the request can be tracked through the system to completion. In the near future this function may be done automatically;

b. **Filtered**. Requests are examined to;

(1) ensure that all the required details are present;

(2) eliminate collection requests which cannot be met and refer these back to the requester for clarification or to a higher or flanking agency that can fulfil them; and

(3) check whether the requested information is already available;

c. **Consolidated**. New collection requests are consolidated with current requirements to determine whether or note they can be combined;

d. **Prioritised**. Requirements are prioritised by the information collection manager in conjunction with the supporting All-Source Cell (ASC) to ensure that everything is synchronised with the Commander's intent and concept of operations; and

e. **Requirements Development**. The collection manager in conjunction with the G2 Estimates develops questions stemming from combat indicators to satisfy the PIRs and IRs. These questions become specific tasks for information collection sources(It should be noted that in future, an ISTAR collection manager could exist, who would manage the tasking and collection of information on behalf of the G2).

## PREPARATION OF THE INFORMATION COLLECTION PLAN

39. An entirely new plan is seldom prepared, except when a formation or unit begins a new operation or phase of war in conjunction with a new formation Op O or Frag O. **As such, it is a document that is constantly updated and modified throughout the operation**. It is closely integrated to the ISTAR Matrix insofar as the ICP provides the guidance for collection and co-ordinates resources while the ISTAR Matrix implements the plan.

40. The ICP reflects the collection strategy adopted by the G2 in order to meet the Commander's SA requirements. This includes an examination of all outstanding collection requirements, their relative priorities, the prevailing tactical situation, and the desired overlap between different sensors and disciplines.

41. **The ICP**:

a. provides a list of intelligence and information requirements in order of priority;

b. provides a list of relevant combat indicators;

c. provides a list of all available sources and agencies;

d. specifies the form in which reports are to be made, the time by which reports are required, and whether negative reports are required;

e. illustrates how the information collection burden is spread. There is normally no requirement for a written collection plan to be prepared at Battle Group. Formal collection plans are normally prepared at all higher levels where an abundance of information collection resources exist and multiple taskings occur. Although, with the provision of resources to Battle Groups in increasingly complex military OOTW and PSO environments, it might be prudent for unit intelligence staffs to apply this process. While these serve as internal working documents for the G2 staff, it is also prudent to disseminate them to other HQ staff members and external intelligence staffs; and

f. as the ICP is modified, it depicts what information has and has not been collected, so that future information tasks can be identified and put into perspective vis-à-vis prior requirements and tasks.

42. Once the available sources and agencies have been entered on the work sheet, PIRs are listed in order of priority. For each PIR, the IR/RFI that must be filled are then listed. Once the IR/RFI are listed, very specific questions based on associated combat indicators are developed and listed in the Combat Indicators column. Information collection sources are then identified which have the technical capability to answer specific questions. Examples showing the downward flow from an intelligence problem to the development of associated Combat Indicators are shown at Figure 2-3 .

**INTELLIGENCE PROBLEM**: Where, when, and in what strength will 280 MRR attempt to cross the River ASTRIX

DTG:051530Z JAN00

MISSION: OP PROMETHEUS

| PRI | PIR | IR | INDICATORS | UNIT A | UNIT B | UNIT C | PTLS | RECCE | EW | UAV | FLANKING | LTIOV | REPORTS | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PIR#1 Where will 280 MRR cross the river? | IR#1 Does 280 MRR have div level br eqpt? | a. TMM at NV 2645 | | | | | x | x | x | x | 260600Z | RECCEXREP | NAI W1003 |
| | | | b. Div engr plant in area NV 2952 | x | | x | | x | x | x | x | 260400Z | RECCEXREP | NAI W1002 |
| | | IR#2 In what condition are the brs in area NV2549 to NV3056? | a. Engr recce along RIVER ASTRIX | | x | | x | | x | x | | As reported | CONTACT | NAI W1004 - Two SB Ptls |
| | | | b. Air recce N of BROUCKSELE | | x | x | x | x | x | x | x | As reported | | Co-ord with allied bde to right |
| 2 | PIR#2 When will 280 MRR cross the river? | IR#1 Is the obs clearing eqpt of 280 MRR back up to str? | a. Mine rollers in fwd det | | | | | x | x | x | x | 260400Z | EO | |
| | | | b. Loc, dispn of 2S1 btys in vicinity RIGAL | | | | | x | x | x | x | 260400Z | EW/EO | Comd to req additional UAV msns |
| 3 | PIR #3 In what str will 280 MRR cross the river? | IR#1 Where is the assessed Div immed obj? | a. Loc, dispn of T-72 Bns | | x | | x | x | x | x | x | 260400Z | CONTACT/EO | Three hel recce msns aval as of 252200Z |
| | | | b. Loc, dispn of 2S3 btys | | x | | x | x | x | x | x | As indicated by higher-260300Z | EW/EO | NAI W1003 |
| | | | c. Loc, dispn of 81 Indep Tk Bn | | | | | x | x | x | x | As reported | EW/EO | |

Figure 2-3: Example of Information Collection Plan Format

**(NEW FIGURE 2-3, (2-2 IS DELETED)**

## SOURCE/AGENCY SELECTION

43. **Selection of Sources and Agencies**. The following factors are considered when selecting sources and agencies for specific tasks:

a. **Security**. Sources and agencies must be adequately protected. Although the identity of sources and agencies can be disclosed to Commanders and principal staff officers, especially with HUMINT sources, a "need-to-know" must exist before identities are revealed. Failure to protect sources can lead to non-co-operation in the future by the compromised source and other sources or potential sources which become aware of lax security measures;

b. **Capability**. Sources must have the knowledge and/or technical capability to gather information and relay the information to the intelligence staff in a timely manner. Time availability, human endurance, visibility and cloud ceilings, EM spectrum activity, and other factors must all be considered before assessing whether a particular source shall be tasked;

c. **Suitability**. All sources have limitations. Reconnaissance patrols cannot provide aerial photography of bridges behind adversary lines; aerial reconnaissance resources cannot determine the river bed conditions at the same bridge. Although many sources may be capable of performing a particular collection mission, some sources may be more suitable than others;

d. **Risk**. Sources face different levels of risk, depending on the collection task and situation. Where the air defence threat is low but adversary presence around an objective is high, aerial photography may be a better option than attempting a risky patrol insertion to photograph the objective. Risks must be measured against the value of the information sought, and the possibility that objectives may be compromised;

e. **Weather and Terrain**. The effects of weather and terrain on the ability of a source or agency to collect information must be integrated into the selection and tasking process; and

f. **Multiplicity and Balance**. More than one source is tasked whenever possible to provide greater assurance that the information desired will be collected. "Multiplicity" also provides a means of verifying information received and guarding against adversary deception practices. "Balance" provides an even distribution of the workload among the various information collectors available.

44. **Productivity of Sources**. Source productivity depends on source training and equipment, the range and effectiveness of surveillance devices, the need for security, resource availability, operational priorities, speed of communications, source mobility, access restrictions, the masking effects of weather and terrain, the effectiveness of adversary counter-measures, OPSEC measures, and other factors.

45. Productivity of sources is monitored to assess the suitability of individual sources for future information collection tasks. If information received from a particular source is seldom valid or received on time, if conditions for source use become restrictive, and/or the source proves not to be normally reliable, other sources must be selected.

## SOURCE/AGENCY TASKING

46. The senior intelligence officer can have information collection resources which are controlled by the intelligence staff/line unit, or to which the intelligence officer has access to via the seamless intelligence architecture tasked by request. These resources could include such things as HUMINT/CI teams, meteorological analysts, tactical imagery resources and higher intelligence line units. If the information required is outside the G2's purview, there should be no hesitation in passing the requirement upwards, although future trends indicate that the establishment of a seamless intelligence architecture should enable rapid access and research capabilities to aid intelligence staffs at all levels.

47. In today's staff system, the activities of all other formation and unit resources, even activities that are associated strictly with information collection, are controlled by the G3. Hence, all requests to have formation and unit resources collect information must be presented to the G3 for case by case approval and tasking. This avoids unnecessary duplication of G2-G3 efforts, and ensures that intelligence-operations efforts remain focused and co-ordinated. Ideally, this is normally done once at an ISTAR co-ordinating conference as part of IPB.

48. Intelligence staffs can obtain information from flanking units during visits, or through liaison officers. Information requests likely to involve the tasking of flanking formation/unit resources, however, are normally passed through higher HQ G2 staffs for approval and co-ordinated with the G3 so that both G2/G3 staffs are functioning together in a symbiotic fashion.

49.

50. In summary, direction may be imparted through the use of:

a. Information Collection Plan;

b. Intelligence Annex to an OPO;

c. ISTAR Plan or Overlay; and

d. ISTAR Matrix.

;

# SECTION 3
# COLLECTION

## GENERAL

51. Collection is the second phase of the Intelligence Cycle. During this phase, information collection sources and agencies:

a. gather information; and

b. deliver information to the requesting intelligence staff.

## INFORMATION GATHERING

52. The sources and agencies that gather information are covered in Chapter 3. Other details concerning the acquisition of HUMINT, IMINT, SIGINT and TECHINT information are covered in Chapters 4, 5, 6 and 7.

## DELIVERY OF INFORMATION

53. **"Pre-Processing" of Information**. Some sources, such as EW or imagery exploitation (IE) and TECHINT specialists, carry out a degree of information processing for their products to be understandable and useful to intelligence staffs. This "pre-processing" of information serves to make technical information readily understandable by non-technical specialists, and also serves to extract usable information from large amounts of seemingly unimportant data. These sources do in fact create single source intelligence products that need to be incorporated with other intelligence and information to produce all-source intelligence. However, for most tactical resources, the purpose of pre-processing is to reduce the amount of redundant sensor data or information being passed throughout the battlefield. Pre-processing cannot be allowed to affect the timeliness of the sensor data or information insofar that units and staffs should realize the difference between information that needs to be analyzed and that required to maintain a strong 'sensor-shooter' link. For most sensor capabilities, pre-processing is encouraged.

54. **Perishable Information and Intelligence**. The combat intelligence system often serves commanders fulfilling missions in fast-moving situations. For the system to meet the needs of the Commander:

a. combat information must be delivered as quickly as possible to intelligence staffs/units for processing and dissemination, before the combat information loses its value as an indicator of adversary capabilities and intentions; and

b. combat intelligence must be quickly disseminated before it loses its predictive value as a planning aid to commanders, operations staffs, and units. Commanders require intelligence, not historical reports, to successfully perform assigned missions. A major part of a commander's direction to his intelligence system is the establishment of timelines for intelligence reporting.

55. The need to produce near real-time intelligence from a variety of sources requires the presence of intelligence speciality personnel with intelligence units, sound SOPs for handling and processing information, and the availability of communications and information systems (CIS) that can link intelligence staffs at various levels of command. For example, in order to obtain near real-time intelligence from aerial sensors, imagery analysts equipped with suitable CIS for data processing and exploitation must be an integral part of intelligence capabilities. Similarly, other sources such as EW, artillery and reconnaissance must have robust, interoperable connectivity to the ASC.

## THE INTELLIGENCE DATABASE

56. The intelligence database is the central focus of the formation/unit combat intelligence system. The database contains basic intelligence, combat information and intelligence reports provided by sources and agencies, and finished intelligence products disseminated to users. Intelligence databases may be interconnected for the automatic exchange of information and intelligence at various security classification levels within the same Local Area Network(LAN). The desired end state is a seamless intelligence architecture with appropriate access to required databases, insofar as the Intelligence Database is comprised of many databases-a system of systems.

# SECTION 4
# PROCESSING

## GENERAL

57. Information is converted into intelligence through the following closely-related stages:

a. **Collation**. This involves the grouping together of items of related information to provide a record of events and facilitate further processing;

b. **Evaluation**. This involves determining source reliability and information credibility;

c. **Analysis**. This involves identifying significant facts, comparing them with existing facts, and drawing conclusions about them;

d. **Integration**. Integration involves placing all the analysed information(and other single source intelligence) together to form a pattern of events or to create a picture of the situation being studied; and

e. **Interpretation**. Interpretation involves deciding what the integrated information means in terms of what is likely to happen in the future.

## COLLATION

58. Collation is the procedure for receiving, grouping and recording all reports arriving in an intelligence office, at any level. It involves:

a. the routine office work of registering and recording all in-coming information(could be automated);

b. logging, map and chart marking, filing, card-indexing, and database entry work(could be automated); and

c. maintaining effective manual or electronic databases for the intelligence staff.

59. **Principles**. The establishment and operation of a collation system is based on the following principles:

a. **Standardisation**. The use of similar subject headings, filing systems, data processing software and files, etc save time and effort during information database searches;

b. **Division Under Subject Headings**. Initial planning of how data and intelligence is to be sorted and stored simplifies and speeds the collation effort once the information flow begins;

c. **Cross-referencing**. The filing system is designed so that each arriving data entry, where applicable, can be cross-referenced to the original report, the log, and card indexes;

d. **Presentation**. The system allows the visual impact of maps, graphs, diagrams, etc to be exploited to the fullest extent possible;

e. **Urgency**. A properly organised system enables analysts to draw information from the database rapidly and to produce intelligence in time to be of value;

f. **Volume of Records**. The size of the recording system is dictated by the size of the intelligence staff and office space, the nature and speed of operations, the size and scope of the intelligence task, and IS available;

g. **Office Routine**. For the system to remain operable, decisions must be made concerning what information is necessary to keep, what information is desirable to keep, and what information is likely not to be further needed. The collation staff, under the direction of the senior intelligence officer and the supervision of the senior collator must often carry out ruthless thinning of the database. Without this necessary action, the information database becomes too difficult to manage; and

h. **Use of Automation**. Special attention is paid to the structuring of data processing programmes and the organization of electronic databases to facilitate clear documentation, the easy retrieval of recorded data, and system interoperability.

60. **Organizing a Collation System**. In a properly organised collation system:

a. reports are recorded and indexed in such a way that information can be retrieved swiftly and easily;

b. the relationship between separately recorded but related reports is evident;

c. pertinent information is highlighted and not obscured by a mass of trivial facts;

d. gaps in knowledge are readily apparent so that they can be taken into account in collection planning; and

e. information and intelligence are recorded in a form which require minimum re-phrasing or re-grouping efforts by analysts.

61. **The Intelligence Log**. During operations, intelligence staffs and units monitor operations command nets and receive in-coming message traffic. All pertinent information and intelligence received is recorded in the intelligence log. Once a log sheet is completed, it is disseminated to the operations, air, engineer and artillery staffs in a HQ. In return, the intelligence staff receive the log sheets from other HQ staff elements. In the presence of local area networks and sophisticated systems, the Intelligence Log is changing dramatically, especially with staff having access to a COP. Log sheets may be generated and disseminated electronically or may become redundant altogether in future. The processing of incoming messages and reports may be done automatically, from start to finish, and the audit trail accessed only when required.

62. When completing intelligence log sheets:

a. the classification of the log sheet is entered on each page;

b. where appropriate, deductions are recorded in the "action" column as "comment"; and

c. the destination/file number of in-coming messages is entered, and a log serial number is written on each message.

63. **Map and Overlay Collation**. At Division and below, intelligence data is normally displayed on 1:50,000 scale maps. Echelons above Division normally use 1:250,000 scale maps. With the advent of electronic maps, the scale of a map is not as important as ensuring that the accompanying overlays are of the same scale as the map being used. It is then possible to zoom in and out at various scales at random.

64. The amount of detail displayed varies with the information requirements of the operation, however the guidelines at Figure 2-4 are generally followed.

| HQ LEVEL | DETAIL DISPLAYED DOWN TO |
|---|---|
| Corps | Regiments and specialised battalions |
| Division | Battalions and specialised companies |
| Brigade Group/Brigade | Companies and specialised platoons |
| Battle Group | Platoons and heavy weapon systems |

**Figure 2-4: Map Detail**

65. **ORBAT Records**. When the identification, strength, command structure, and disposition of adversary personnel, units and equipment is known, a clearer understanding of adversary capabilities and intentions can be gained. ORBAT production is one of the original staff duties of intelligence and was formerly a vast undertaking at national level. Increasingly it is becoming very "mission specific" and is considered in NATO to be an applicable task for intelligence personnel at all levels of command Sophisticated software programs exist, but ORBAT creation, management and maintenance are still personnel-intensive and will remain the norm for some time in the future.

66. **Notebooks**. In order to facilitate eventual link analysis, Intelligence officers and senior NCOs may want to maintain an electronic,classified notebook or work book containing items of potential intelligence significance. It may as simple as bookmarking relevant events,

and the design and format of the notebook will probably vary according to the level of command, area of employment and type of mission.

## EVALUATION

67. The aim of the evaluation stage is to determine and indicate the degree of confidence placed in particular items of information received.

68. **Rating System**. When apparently significant information is received, the reliability of the source and the credibility of the information is evaluated. As shown at Figure 2-5, a standardised alpha-numeric rating system exists to indicate:

a. the degree of reliability of sources, expressed by the letters A to F; and

b. the degree of credibility of information, shown by the figures 1 to 6.

| SOURCE RELIABILITY | | INFORMATION CREDIBILITY | |
|---|---|---|---|
| A | Completely reliable | 1 | Confirmed by other sources |
| B | Usually reliable | 2 | Probably true |
| C | Fairly reliable | 3 | Possibly true |
| D | Not usually reliable | 4 | Doubtful |
| E | Unreliable | 5 | Improbable |
| F | Reliability cannot be judged | 6 | Truth cannot be judged |

**Figure 2-5: Evaluation rating system**

69. Thus, information received from a "usually reliable" source, which is judged to be “probably true”, is rated "B2". Information from the same source of which the "truth cannot be judged" is rated "B6".

70. Reliability and credibility are considered independently of each other. The assigned rating, for example “B2” is included with the information when it is disseminated. Generally, the ratings are applied to HUMINT and COMINT.

## ANALYSIS

71. During the analysis stage, information is reviewed to identify significant facts and to draw deductions from these facts. The deductions need to be categorised in terms of most likely to least likely and a judgement made as to relevance.

## INTEGRATION

72. Integration is the creation of a coherent picture by combining deductions. Through the fusion process of the integration stage, intelligence and information from multiple sources and agencies are blended with the deductions to form the coherent picture.

73. After this fusion has occurred, the origin of individual items of information is normally no longer apparent. Caution must be exercised during the fusion process not to improperly add information protected by a high security classification into an intelligence product that will be assigned a low security classification.

## INTERPRETATION

74. The coherent picture needs to be interpreted to complete the process of producing intelligence.

75. Interpretation is an objective and impartial mental process based on common sense, experience, service knowledge, previously obtained information, comparison and deduction, all contributing to the attempt to discover:

a. what is occurring, why, and by whom;

b. what is likely to occur, when, and where; and

c. what does it mean? So what?

76. Interpretation is made easier by splitting the mental exercise into the following steps:

a. **Identification**. The size, nature, reputation, and type of units often offer clues as to intentions associated with their presence;

b. **Activity**. Comparison with previous information on recent and historic unit activities and training often provide clues as to adversary intentions; and

c. **Significance**. Conclusions drawn from unit identification and activities are related to confirmed combat indicators.

## COMMENTS/ASSESSMENTS

77. Intelligence is deduced from facts or information, and it is essential when disseminating intelligence that the difference between what has been reported and what has been deduced is maintained. When several interpretations are equally plausible, all options are stated. In an effort to clearly distinguish between facts and comments, intelligence reports normally:

a. refrain from stating comments and assessments until after the facts are summarised in preceding sentences or paragraphs;

b. precede the text of the comment with "Comment"; and

c. introduce assessment paragraphs with the word "comment" or "assessment".

78. Where it is appropriate to introduce a comment elsewhere in an intelligence report, as in on an overlay INTSUM, the comment is normally preceded by the word "comment" and finished by the words "comment ends". In oral briefings, a phrase such as "It is assessed..." is used.

79. **Counter-Deception**. Analysts must be wary of misleading indicators and adversary deception practices, and must seek reliable confirmation of event patterns. The rapid cross-checking of facts through the use of data processing equipment assists analysts to detect false

confirmations and adversary attempts at deception, however analysts must also rely on alertness, attention to anomalies, open-mindedness and a professional scepticism.

## SECTION 5
## DISSEMINATION

### GENERAL

80. Dissemination is the timely conveyance of intelligence in an appropriate form and by any suitable means, to those who need it. Intelligence arriving too late or in an unsuitable form for a commander and the operations staff to act on is virtually useless, except to help maintain the unit war diary. Intelligence must be presented in a manner that will help a commander understand what is going to happen in the given battlespace.

### PRINCIPLES

81. Intelligence products are disseminated in accordance with the following principles:

a. **Clarity**. Intelligence assessments are stated in a clear and unambiguous fashion. A clear differentiation is made between established facts, deductions, and predictions;

b. **Conciseness**. Reports are as brief as possible, yet include everything the recipient needs to know;

c. **Standardisation**. Reports are understood more quickly and easily when standard formats are used. Formats are normally established in SOPs;

d. **Urgency**. Whenever possible information is converted into intelligence prior to dissemination. On occasion, however, urgent combat information is disseminated without extensive processing to keep pace with mobile operations, sudden developments, or targeting requirements;

e. **Distribution**. Intelligence staffs are responsible for ensuring that all information and intelligence is passed to all who need it, including intelligence staffs in flanking formations or units. A record of dissemination is entered into the intelligence log;

f. **Regularity**. Intelligence is disseminated on a regular basis to ensure that users are kept abreast of current developments and to reinforce the rapport between intelligence staffs and those they support. When intelligence dissemination is critical, dissemination is not delayed to fit normal routine; and

g. **Security**. Disseminated intelligence is safeguarded in a manner appropriate to its security classification. Over-classification of intelligence products is avoided to ensure that intelligence produced is disseminated to as many personnel who have a genuine need-to-know as possible.

## FORMS AND MEANS OF DISSEMINATION

82. **Forms**. Forms of dissemination include oral, written, and graphical methods. The method adopted is tailored to meet the requirements of users.

83. **Means**. Means of dissemination may include the use of a Local Area Network, combat net radio, and dispatch riders for example, all within a CIS environment. These means ensure that intelligence can be disseminated to subordinate, higher and allied intelligence staffs even during periods of radio silence or highly mobile environments.

84. **Oral Briefings.** Oral dissemination includes transmission via combat net radio if necessary, personal contacts, visits by liaison officers, formal briefings, and impromptu briefings.

85. Oral briefings have the following advantages:

a. the material briefed is very current;

b. facts which might take too long to write down and transmit can be included;

c. controversial deductions or difficult concepts can be explained during "question sessions"; and

d. material can be quickly grasped by the recipient, particularly if the presentation involves the use of maps, models and diagrams.

86. **Oral briefings should**:

a. be confined to intelligence and information about adversary forces, the weather, and terrain;

b. follow a standard pattern;

c. conclude a presentation of facts with an estimate of adversary force capabilities and intentions;

d. be presented as briefly as possible and remain focused on user requirements;

e. cover only the period which has elapsed since the last briefing to the same audience; and

f. whenever possible, be delivered in a straight-forward manner, using sketch notes rather than fully-written, audience-alienating scripts as an aid to memory rather than fully-written scripts[12].

87. **Written Reports.** Written reports and summaries can present considerably more detail than oral reports, however the intelligence disseminated is normally less current given the time requirements to produce and disseminate written reports. (See formats.) The exception to this would be an electronic environment whereby intelligence is routinely updated throughout a Local Area Network to support a COP or electronic responses to RFIs.

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[12] A useful format is enclosed as a guide at Appendix 5 to Annex B.

88. Written intelligence reports include:

a. **Intelligence Reports**. Intelligence reports (INTREPs) are sent without regard to a specific time schedule whenever intelligence or information received is considered of sufficient importance to require the immediate attention of the recipient(s). INTREPs include any relevant deductions that can be made in the time available.

b. **Supplementary Intelligence Reports**. Supplementary intelligence reports (SUPINTREPs) are periodically produced reports which provide detailed reviews and analysis of all the intelligence data on a specific subject which has been collected over a period of time.

c. **Intelligence Summaries**. Intelligence Summaries (INTSUMs) are regularly produced summaries of the current adversary situation within the Commander's area of responsibility. At higher levels, emphasis is placed on assessments rather than a restatement of details contained in lower-level reporting. In the near future, electronic INTSUMS should be available on demand; and

d. **Graphical INTSUMs**. Graphical INTSUMs are regularly produced summaries of the current adversary situation within the Commander's area of responsibility. They are used frequently when numerous details concerning adversary dispositions, boundaries and movements must be passed. They differ from normal INTSUMs in the following respects:

(1) the information is disseminated graphically, rather than in message or electronic text formats;

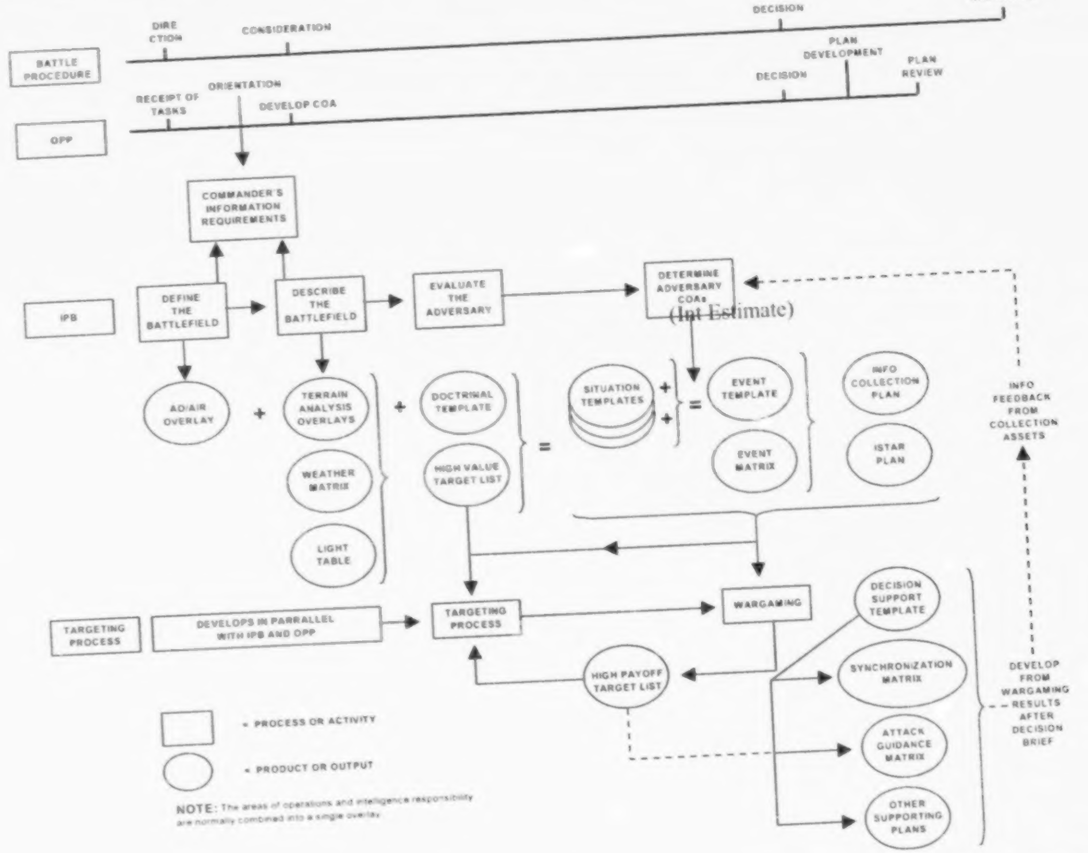
(2) adversary dispositions, boundaries, and movements are shown through map symbology. Information which cannot be graphically depicted is written in available spaces on the overlay; and

(3) increasingly, digital, graphical INTSUMs will become the norm. However, the format and

methods of creation and dissemination will probably change in a digital COP environment.

## ANNEX A TO CHAPTER 2

## INTEGRATING INTELLIGENCE PREPARATION OF THE BATTLEFIELD WITH THE OPERATIONAL PLANNING PROCESS


BATTLE PROCEDURE
DIRE CTION
CONSIDERATION
DECISION
EXECUTION
OPP
RECEIPT OF TASKS
ORIENTATION
DEVELOP COA
DECISION
PLAN DEVELOPMENT
PLAN REVIEW
COMMANDER'S INFORMATION REQUIREMENTS
IPB
DEFINE THE BATTLEFIELD
DESCRIBE THE BATTLEFIELD
EVALUATE THE ADVERSARY
DETERMINE ADVERSARY COAs
(Int Estimate)
AO/AIR OVERLAY
+
TERRAIN ANALYSIS OVERLAYS
WEATHER MATRIX
LIGHT TABLE
+
DOCTRINAL TEMPLATE
HIGH VALUE TARGET LIST
=
SITUATION TEMPLATES
+
+
=
EVENT TEMPLATE
EVENT MATRIX
INFO COLLECTION PLAN
ISTAR PLAN
INFO FEEDBACK FROM COLLECTION ASSETS
TARGETING PROCESS
DEVELOPS IN PARRALLEL WITH IPB AND OPP
TARGETING PROCESS
WARGAMING
HIGH PAYOFF TARGET LIST
DECISION SUPPORT TEMPLATE
SYNCHRONIZATION MATRIX
ATTACK GUIDANCE MATRIX
OTHER SUPPORTING PLANS
DEVELOP FROM WARGAMING RESULTS AFTER DECISION BRIEF
= PROCESS OR ACTIVITY
= PRODUCT OR OUTPUT

NOTE: The areas of operations and intelligence responsibility are normally combined into a single overlay

Figure 2-6: The Decision Making Process(Decision/Action Cycle, OPP and IPB)

## APPENDIX 1 TO ANNEX A
## TARGET DEVELOPMENT [13]

1. This section is intended to outline the basic concepts of the targeting process as it forms a sub-process of the OPP and involves significant intelligence input. For detailed instruction and specifics on the targeting process refer to the US Army manual FM 6-20-10, Tactics, Techniques, And Procedures For The Targeting Process.

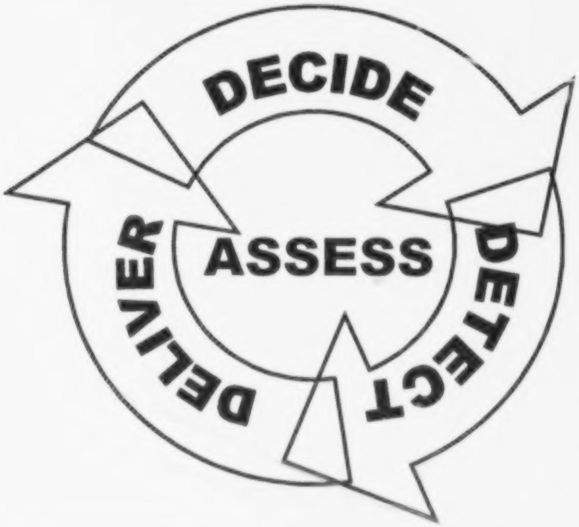


**Figure 2-7: Targeting Methodology**

2. The targeting methodology can be characterized by four inherently intertwined functions; *decide, detect, deliver and assess*. The targeting process will support the Commander's decision of how the Commander intends to use fires. The targeting process helps the Commander determine which attack option will be used to engage targets, and which resources will engage them. Intelligence and Electronic Warfare (IEW) resources play a

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[13] Taken from ABCA QSTAG 1034, adapted for Canadian terminology

role in the targeting process. IEW resources are given targeting missions through the intelligence collection plan.

3. At the brigade and battalion the planning associated with a successful targeting effort requires close interaction between the Commander and the firing triad. The firing triad is composed of the Fire Support Co-ordination Centre (FSCC), the G3 and the G2.

## DECIDE FUNCTION

4. Together, during the **Decide** function, the Commander and firing tirade decide:

- a. what targets are to be acquired;
- b. when they are to be acquired;
- c. what is required to defeat the target; and
- d. what damage assessment is required.

5. This step is referred to as Target Value Analysis (TVA). TVA identifies the threat targets of value. TVA includes:

- a. developing a target list;
- b. determining HVTs. HVTs are those resources that the enemy commander requires for the successful completion of his mission;
- c. determining HPT's. HPT's are those HVTs that must be acquired and successfully attacked for the success of the friendly commander's mission.
- d. determining Target Selection Standards (TSS). TSS are criteria, applied to enemy activity (acquisition and battlefield information), used in deciding whether the activity is a potential target. TSS break nominations into two categories: targets and suspected targets. Targets meet accuracy and timeliness requirements for attack. Suspected targets must be confirmed before any attack.

TSS are developed by the FSE and are given to the G2/S2. Intelligent analysts use TSS to identify targets that are forwarded to an FSE. Intelligence analysts evaluate the source of the information as to its reliability and accuracy, confirm that the size and status of the activity to meet the TSS, and then compare the time of acquisition with the dwell time, which is the length of time a target is doctrinally expected to remain in one location:

e. a collection plan; and

f. an Attack Guidance Matrix (AGM).

6. The AGM describes which targets are HPT. It also identifies when and how those targets are to be attacked and any restrictions placed on those targets.

| Target Description | Source | Accuracy | When to Attack | How to Attack | Post Attack Assessment | Remarks |
|---|---|---|---|---|---|---|
| Assault Bridging | UAV | B | I | Air,<br>Div arty | UAV | BDE O&I |
| 151 Tank BN | EW, Recce | A | P | Div arty | Recce | BDE O&I |

Notes: 1. Accuracy in accordance with SOPs

2. When: I – immediate, interrupt other attacks

A –as required

P – as planned

3. How – method of engagement

**Figure 2-8: Attack guidance matrix**

7. Indirect fire has the ability of reducing adversary capabilities without committing soldiers to the direct firefight. The development of potential adversary targets is therefore of utmost importance to the manoeuvre commander.

8. The success of target development can be greatly increased by including the staff engineer on the planning process. The engineer will utilize obstacle expertise to incorporate obstacles within the Target Areas of Interest (TAI).

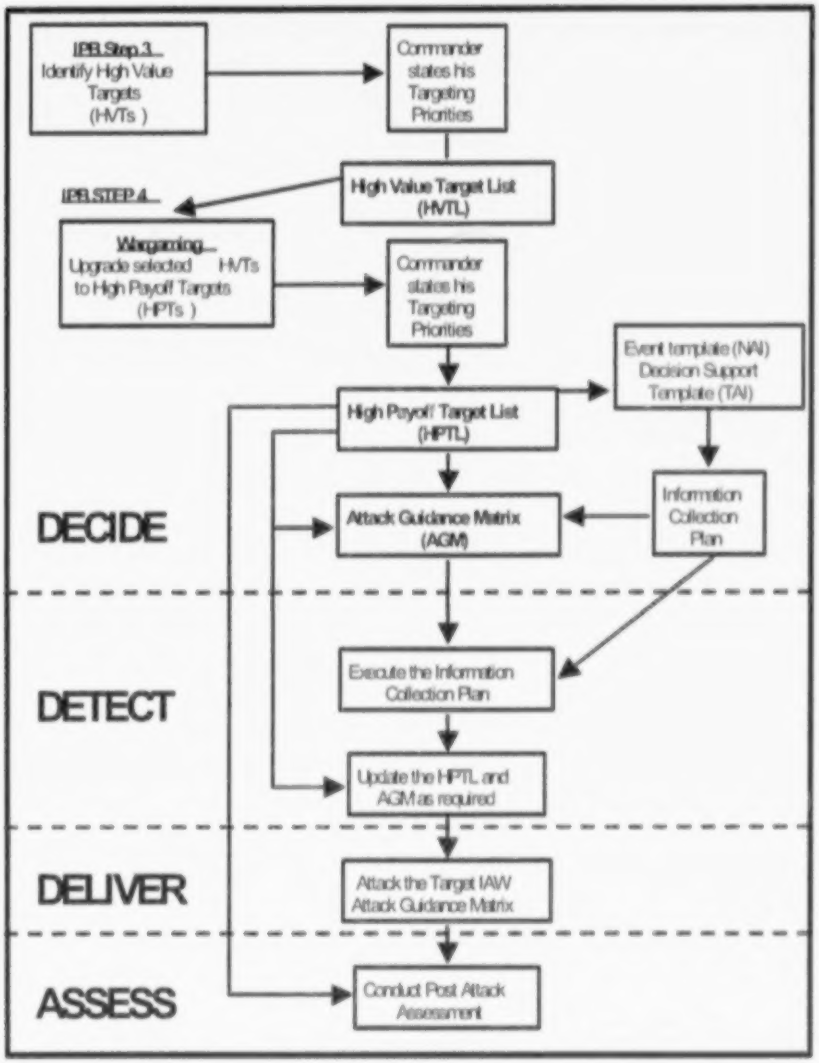
IPB Step 3
Identify High Value Targets (HVTs)
Commander states his Targeting Priorities
High Value Target List (HVTL)
IPB STEP 4
Wargaming
Upgrade selected HVTs to High Payoff Targets (HPTs)
Commander states his Targeting Priorities
Event template (NAI) Decision Support Template (TAI)
High Payoff Target List (HPTL)
Information Collection Plan
DECIDE
Attack Guidance Matrix (AGM)
DETECT
Execute the Information Collection Plan
Update the HPTL and AGM as required
DELIVER
Attack the Target IAW Attack Guidance Matrix
ASSESS
Conduct Post Attack Assessment

**Figure 2-9: Targeting process**

## DETECT FUNCTION

9. The collection and timely reporting of Combat Intelligence is key to the success of all targeting missions. The G2 focuses collection efforts on Named Areas of Interests (NAIs) and TAIs developed during the IPB process. The IPB products, the Situational Template and Event Template

help the G2 determine where and when the threat targets can be acquired. The Commander develops PIRs and IRs that support the detection of adversary targets. In future, at Brigade and even Battle Group, organic collection resources will consist of HUMINT, EW/SIGINT, and tactical IMINT. Higher echelons may provide secondary IMINT and SIGINT. HUMINT at this level may consist of but is not limited to recce resources, patrols and HUMINT/CI capabilities.

10. Collection resources are limited for the Brigade and Battalion Group. Therefore, the G2/IO must carefully select which asset is assigned to cover which NAI. The G2/IO should carefully consider the capabilities of the collection resources prior to tasking them. When formulating the collection plan, the G2/IO emphasizes depth and redundancy. Depth and redundancy allow targets to be tracked throughout the operation. It may take several minutes from the time a target is first identified until rounds' impact on target. When a target is first detected, it is immediately passed to the targeting team. The targeting team determines if the target is a high payoff target or if the target meets the engagement criteria. Close co-ordination is required between the G2 and FSCC to ensure all identified targets which meet the targeting criteria are passed to the fire support system that will engage the target.

# ANNEX B TO CHAPTER 2
# INTELLIGENCE PREPARATION OF THE BATTLEFIELD[14]

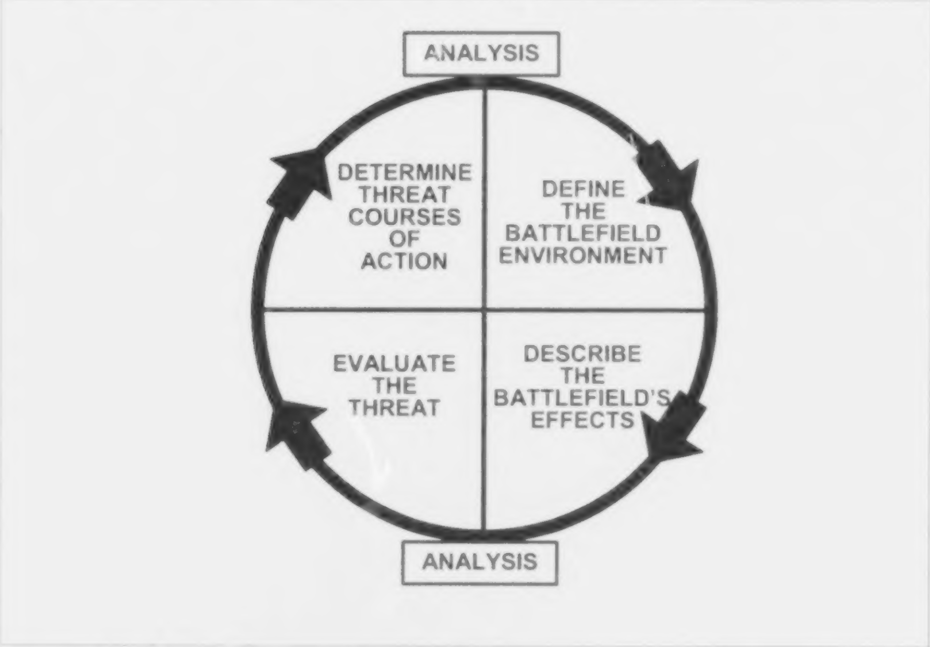
ANALYSIS
DETERMINE THREAT COURSES OF ACTION
DEFINE THE BATTLEFIELD ENVIRONMENT
EVALUATE THE THREAT
DESCRIBE THE BATTLEFIELD'S EFFECTS
ANALYSIS

**Figure 2-11: IPB Process**

1. IPB is a continuous and systematic process of analysing the adversary with existing weather and terrain conditions within a specific geographic environment within the guidelines and tempo of the Operational Planning Process. IPB is conducted to assess adversary capabilities, vulnerabilities and to contribute to the wargaming of likely adversary courses of action versus those of friendly forces. IPB is *homework* that each echelon must accomplish prior to the initiation of battle. IPB is an important function in developing the battlefield situation. Through IPB, commanders can manoeuvre resources and identify intelligence

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[14] Taken largely from ABCA QSTAG 1034, *Intelligence Preparation of the Battlefield*, and adapted to Canadian requirements. In addition, it is a matter of record that the Canadian Army adopted !PB unilaterally in 1994. Additional detail of interest may be acquired from the US Army publication **FM 34-130** *Intelligence Preparation of the Battlefield.*

requirements to ensure the success of the operation. It promotes staff action within the decision making process.IPB consists of four distinct steps:

a. STEP 1 - Define the battlefield environment

b. STEP 2 - Describe the battlefield effects

c. STEP 3 - Evaluate the adversary

d. STEP 4 - Determine adversary courses of action

2. The first step of IPB, defining the battlefield environment must be completed prior to steps two and three of the IPB process. Describe the battlefield effects and evaluate the adversary, steps two and three may be performed concurrently or in sequence. However, the first three steps of the IPB process must be completed before the G2 can begin step four. Determine adversary COAs, integrates adversary doctrine with the environment as it relates to the mission and the specific battlefield.

## DEFINE THE BATTLE FIELD ENVIRONMENT

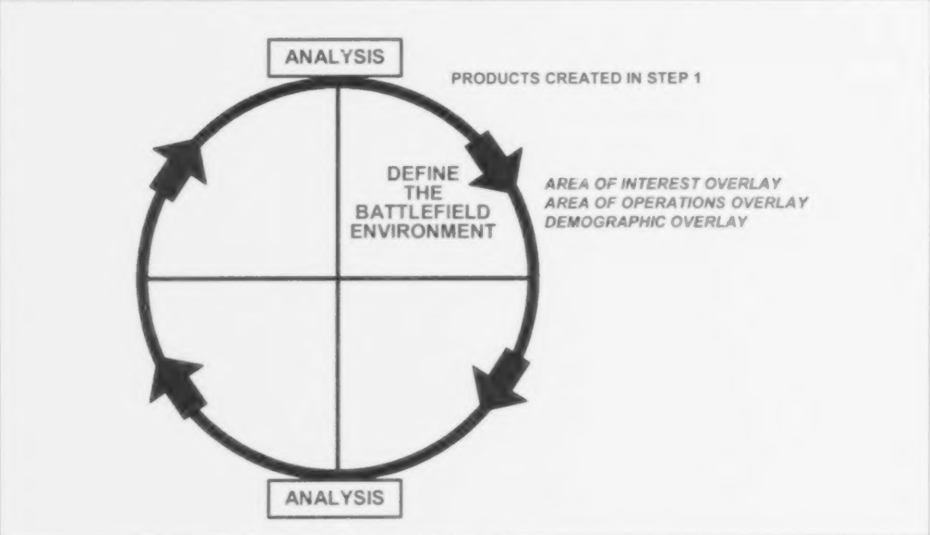

ANALYSIS
PRODUCTS CREATED IN STEP 1
DEFINE THE BATTLEFIELD ENVIRONMENT
AREA OF INTEREST OVERLAY
AREA OF OPERATIONS OVERLAY
DEMOGRAPHIC OVERLAY
ANALYSIS

**Figure 2-12: Step 1 of the IPB process - Define the Battlefield Environment**

3. The first step of the four step IPB process, Define the Battlefield Environment, identifies the geographical limits of the unit's AO, battle

space and area of interest (AI). In addition, it identifies the general physical characteristics of the battlefield that will influence both friendly and adversary operations. Included in these characteristics are the population demographics:

a. ethnic groups;

b. religious groups;

c. income groups, and

d. age distribution.

4. The above includes any existing political or socio-economic factors, including the roles of clans, tribes and gangs operating within the unit's AO and AI.

5. The next higher headquarters typically identifies the AO. The AO is the geographical area where the unit or formation is assigned the responsibility and authority to conduct military operations. When assigning a subordinate unit's AO, the higher headquarters will assess the mission, terrain, weather and doctrinal distance capabilities of the unit, in depth , frontage and airspace. These factors are considered by the higher headquarters, who will then determine the units AO. Establishing the unit Commander's AO is done by the Intelligence Officer at the unit level.

| **Unit Size** | **Area of Interest** |
|---|---|
| Battalion | 12-24 hours |
| Brigade | 48-72 hours |

**Figure 2-13: Area of Interest Time Guidelines**

6. The AI is a function of time and space. It relates to the geographical area from which a commander may need intelligence or information to successfully conduct the mission. Additionally, the AI may permit the Commander to focus planning for future or contingent operations.

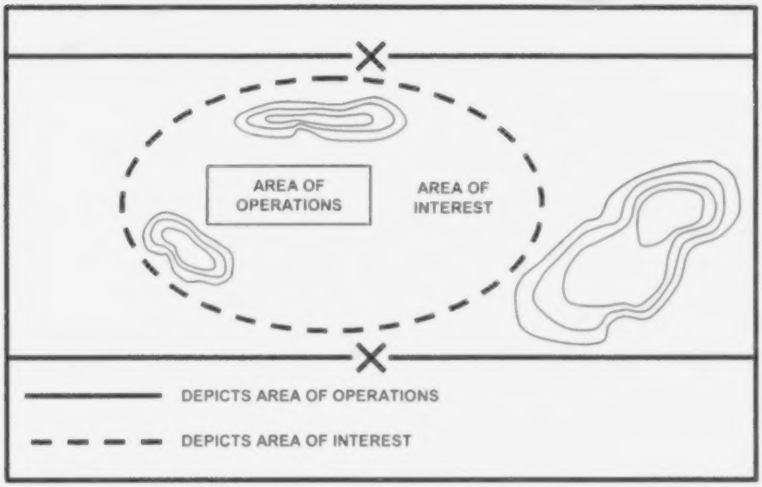

AREA OF OPERATIONS
AREA OF INTEREST
DEPICTS AREA OF OPERATIONS
DEPICTS AREA OF INTEREST

**Figure 2-14: Areas of Operations and Interest**

7. A unit's AO is identified by the maximum capabilities (range) of the unit to acquire targets and physically dominate the adversary. The AO expands and contracts in relationship to the unit's ability to manoeuvre its resources to acquire and engage the enemy. AO includes frontage, depth and height in which a unit intends to position and move its resources over time.

## DESCRIBE THE BATTLEFIELD'S EFFECT

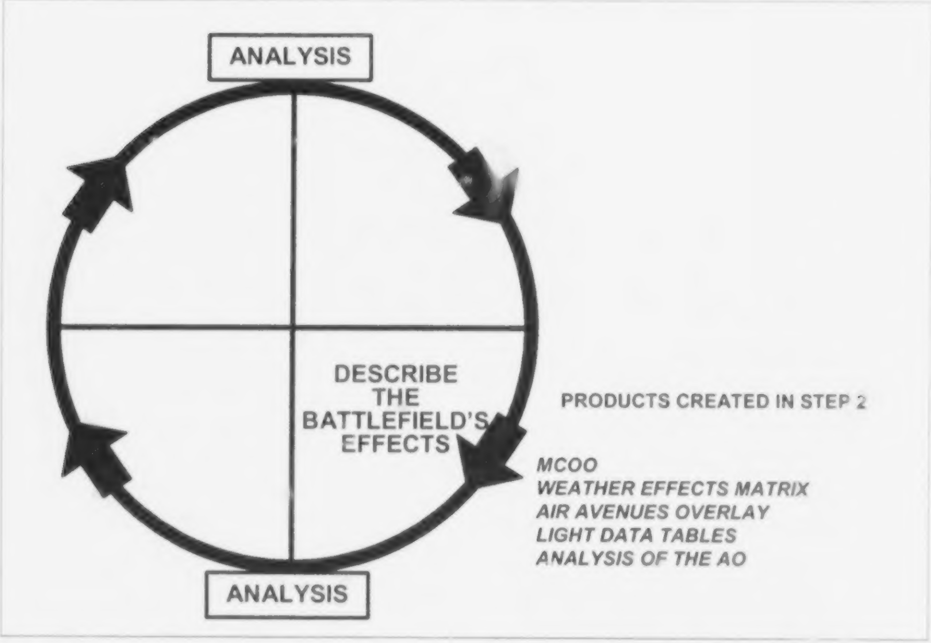

ANALYSIS
DESCRIBE THE BATTLEFIELD'S EFFECTS
PRODUCTS CREATED IN STEP 2
MCOO
WEATHER EFFECTS MATRIX
AIR AVENUES OVERLAY
LIGHT DATA TABLES
ANALYSIS OF THE AO
ANALYSIS

**Figure 2-15: Step 2 of the IPB process - Describe the Battlefield's Effects**

8. When describing the battlefield effects, the IO should visually and orally describe to the Commander and the unit how both weather and terrain will affect the unit's mission.

9. The G2 conducts terrain analysis (TERA) by describing the seven military characteristics of terrain. The mnemonic FLOCARK stands for:

a. F - features;

b. L - lanes;

c. O - objectives;

d. C - canalising ground;

e. A - approaches;

f. R - rate avenues of approach (AA); and

g. K - key terrain (KT) and vital ground (VG).

10. The acronym FLOCARK[15] is used to refer to the seven military characteristics of terrain. The G2 should discuss the relevant FLOCARK factors in detail in the Intelligence Estimate. TERA reduces the uncertainties regarding the effects of terrain on operations. The G2 uses the terrain template, called a Modified combined Obstacle Overlay (MCOO), to graphically depict the terrain The G2 assesses the terrain for effects on operations:

a. hydrology;

b. vegetation;

c. slope;

d. soil composition;

e. obstacles, natural and man made;

f. KT;

g. decisive terrain KT that has extraordinary impact on the mission)

h. mobility corridors (MC)(unrestricted, restricted, and severely restricted);

i. AA(ground/air);

j. lines of communication, and

---

[15] The US Army uses the mnemonic OCOKA, which admits of five military characteristics of terrain:
a. **O**bservation, fields of fire
b. **C**oncealment and cover
c. **O**bstacles
d. **K**ey terrain
e. **A**venues of approach

k. road networks / railway systems.

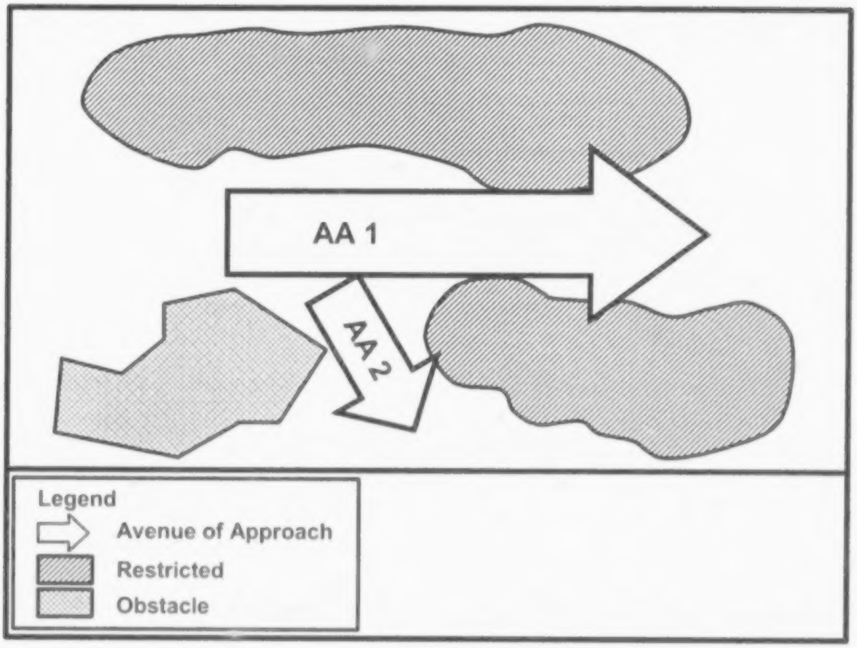

AA 1
AA 2
Legend
Avenue of Approach
Restricted
Obstacle

**Figure 2-16: Modified Combined Obstacle Overlay**

11. The five military characteristics of weather:

   a. temperature and humidity;

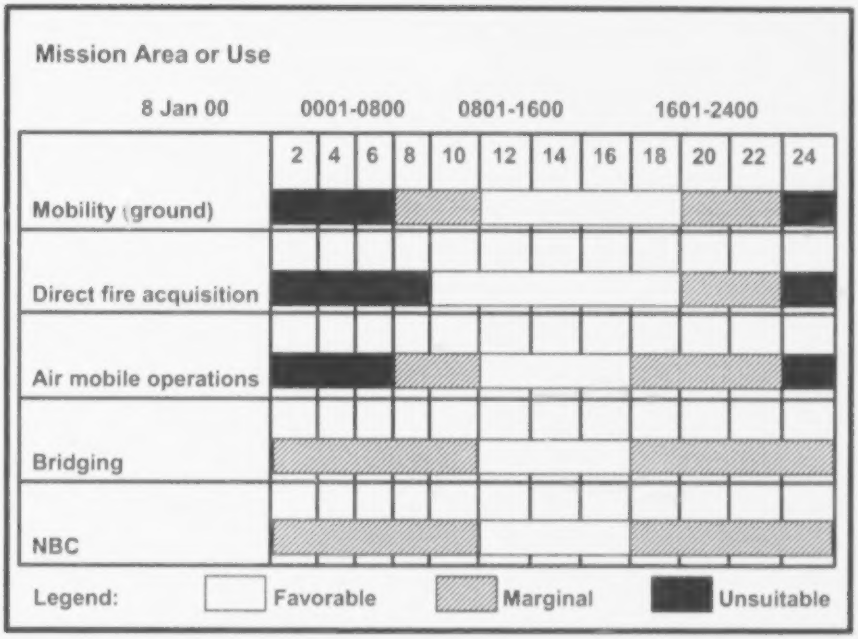
   b. precipitation;

   c. wind;

   d. visibility; and

   e. clouds

The above characteristics are continually monitored and all significant changes are assessed for the effects they will have on operations. In addition, the G2 prepares a weather effects matrix and light data tables.



**Mission Area or Use**

| 8 Jan 00 | 0001-0800 | | | | 0801-1600 | | | | 1601-2400 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| Mobility (ground) | ■ | ■ | ■ | ▨ | ▨ | □ | □ | □ | □ | ▨ | ▨ | ■ |
| Direct fire acquisition | ■ | ■ | ■ | ■ | □ | □ | □ | □ | □ | ▨ | ▨ | ■ |
| Air mobile operations | ■ | ■ | ■ | ▨ | ▨ | □ | □ | □ | ▨ | ▨ | ▨ | ■ |
| Bridging | ▨ | ▨ | ▨ | ▨ | ▨ | □ | □ | □ | ▨ | ▨ | ▨ | ▨ |
| NBC | ▨ | ▨ | ▨ | ▨ | ▨ | □ | □ | □ | ▨ | ▨ | ▨ | ▨ |

Legend: □ Favorable ▨ Marginal ■ Unsuitable

Figure 2-17: Weather Effects Matrix

| Moon rise | Moon set | Sun rise | Sun set | eent | bmnt | Illum | Infra-red crossover | Wind |
|---|---|---|---|---|---|---|---|---|
| 1408 | 0235 | 0647 | 1757 | 1903 | 0536 | 12% | 0853/2312 | NW 08 |
| | | | | | | | | |
| | | | | | | | | |

Figure 2-18: Light data table

## EVALUATE THE ADVERSARY

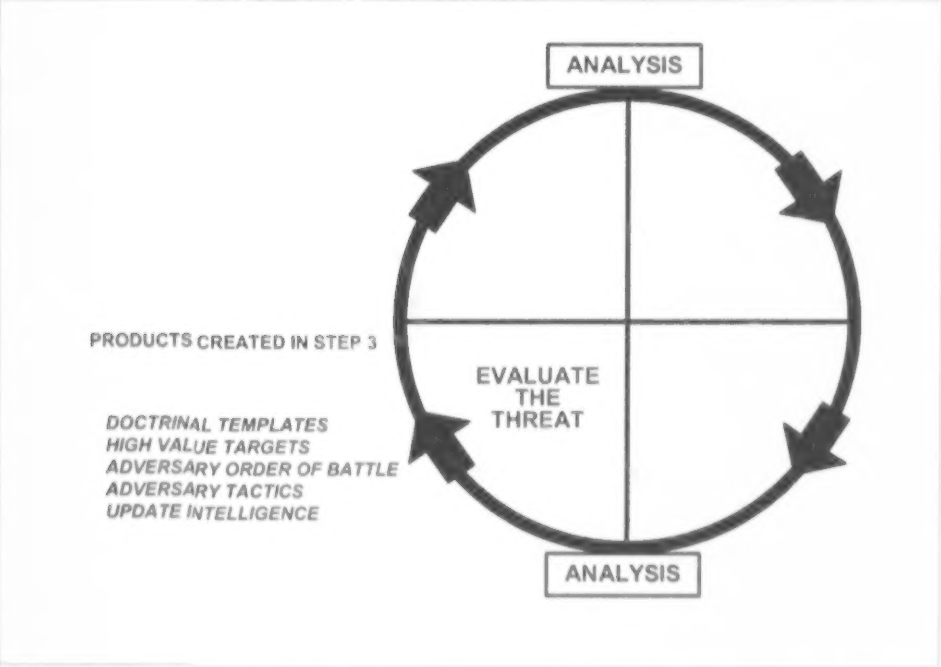

ANALYSIS
PRODUCTS CREATED IN STEP 3
EVALUATE THE THREAT
DOCTRINAL TEMPLATES
HIGH VALUE TARGETS
ADVERSARY ORDER OF BATTLE
ADVERSARY TACTICS
UPDATE INTELLIGENCE
ANALYSIS

**Figure 2-19: Step 3, Evaluate the Adversary**

12. Step three of the IPB process, Evaluate the Adversary, occurs when the G2 determines the capabilities of adversary forces. It focuses on the specific adversary forces expected to be operating in the unit's AO and AI. The G2 will evaluate the adversary doctrinal principles, tactics, techniques and standing operating procedures. To adequately evaluate the adversary the G2 must analyse the battle from the perspective of the adversary commander, that is, the battle through the adversary's eye. During StepThree, for each prospective COA, the G2 will produce these products:

a. a situation template based on doctrinal templates;

b. description of tactics and options; and

c. initial High Value Targets List (HVTL)

13. With thorough understanding of adversary doctrine the G2 is able to produce adversary COA Situation Templates. These doctrinal templates

that form the basis of the COA Situation Templates are a graphic representation of how the adversary commander would like to fight, based on his doctrine. The templates have no limiting factors such as terrain or weather at this time. The COA Situation Templates eventually support the comparison of friendly and adversary COAs, the creation of Event Templates, and COA wargame.

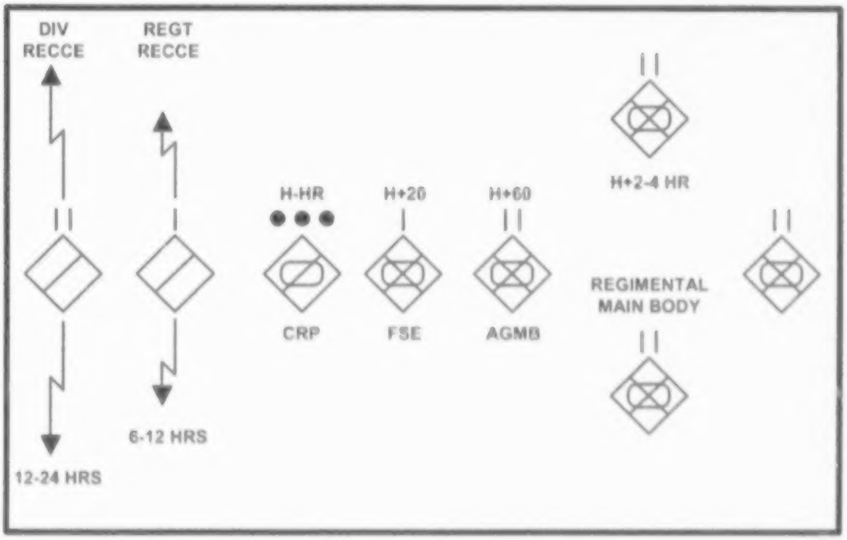

DIV
RECCE
REGT
RECCE
12-24 HRS
6-12 HRS
H-HR
H+20
H+60
H+2-4 HR
CRP
FSE
AGMB
REGIMENTAL
MAIN BODY

Figure 2-20: Doctrinal Template

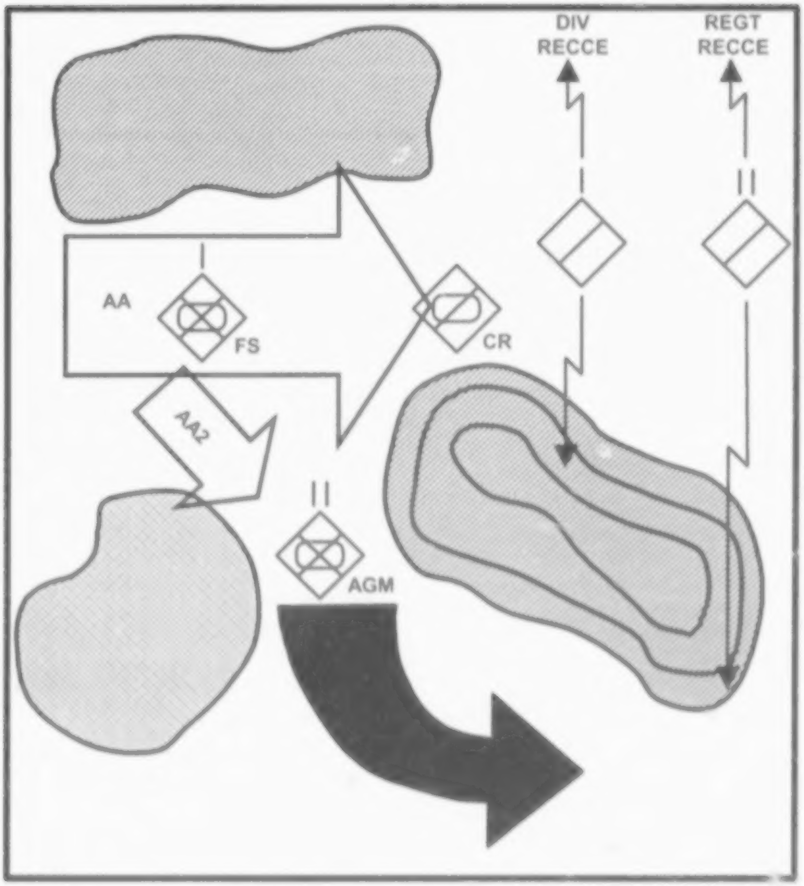


Figure 2-22: Situational Template

14. The adversary ORBAT is typically provided to brigade and battalions by the division headquarters. The ORBAT will tell the composition of all adversary forces operating in theatre. The division headquarters will also provide information as to which adversary forces are expected to be operating in the unit's AO and AI.

15. By knowing the adversary ORBAT and which unit's are operating in the AO and AI, the G2 can make assumptions as to the composition of

adversary forces his unit can expect to face. This will help the Commander determine the force ratio that must be achieved in order to defeat the adversary. In computing the adversary force ratio's the IO must account for all available adversary forces, both committed forces and those forces that may be reinforcing or held in reserve. When computing the adversary's force ratio, always plan for the worst case scenario.

123. Maintaining and up-dating the adversary ORBAT database allows the intelligence officer to identify units as they manoeuvre around the battlefield. The database will also allow the intelligence officer to determine which resources have been pushed down to lower echelons to improve their combat power and force ratios. These factors are critical to the intelligence officer because they help determine where the adversary's main effort is located.

## DETERMINE ADVERSARY COURSES OF ACTION

ANALYSIS
DETERMINE THREAT COURSES OF ACTION
ANALYSIS

**Figure 2-21: Step 4 - Determine Adversary Courses of Action**

16. Step Four of IPB, determine adversary COAs, is where all of the IPB process comes together. The products produced in this Step are, (1)

Event Templates, (2Event Matrix[16], (3) draft ISTAR Plan and (4) Updated HVTL. Steps One through Three must be completed prior to initiating Step Four. When determining the adversary's COAs, the G2 attempts to graphically portray likely adversary actions. The G2 will identify a minimum of three adversary COAs based on the Situation Templates- most likely, next likely and most dangerous. The G2 will attempt to identify as many adversary courses of action, as time will allow. The Situational Template simply takes the doctrinal templates and applies the the MCOO (terrain) and existing weather.

17. **Time Phase Lines.** In adversary offensive operations the G2 attempts to identify the adversary rate of march. Time Phase Lines (TPLs) assist in tracking adversary movement. TPLs assist the io in determining when to cue collection resources. TPLs are created when the G2 applies adversary rates of march to the MCOO (terrain overlay) within a unit's AO and AI. The G2 uses the mathematics equation, rate equals distance divided by time (rate = distance / time) to determine the adversary's rate of march. When actual adversary rates of march are unknown the G2 will use doctrinal rates of march to create TPLs.

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[16] An Event Matrix normally links NAIs, IRs and COAs. It acts as a reminder or summary sheet for the G2 for personal use as battlefield activities unfold.

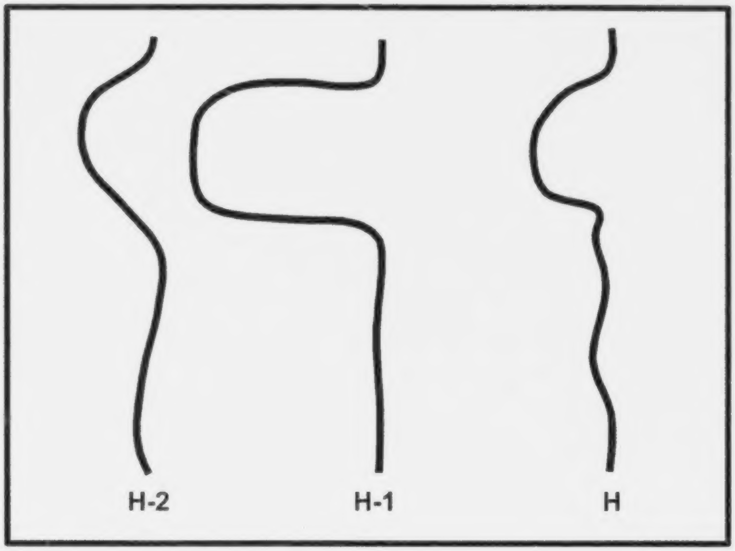


**Figure 2-23: Time Phase Lines**

18. The G2 nominates NAI's to points or areas on the terrain where he thinks adversary activity is likely. NAI's are then assigned to collection resources. NAI's are laid atop the MCOO, along with TPLs to create the Event Template. The Event Template graphically depicts when and where to focus collection efforts. The Event Matrix supports the Event Template. It is the written product produced by the G2 that depicts the times when the adversary activity is anticipated. The times identified on the Event Matrix are expressed in terms of Not Earlier Than (NET) or Not Later Than (NLT).

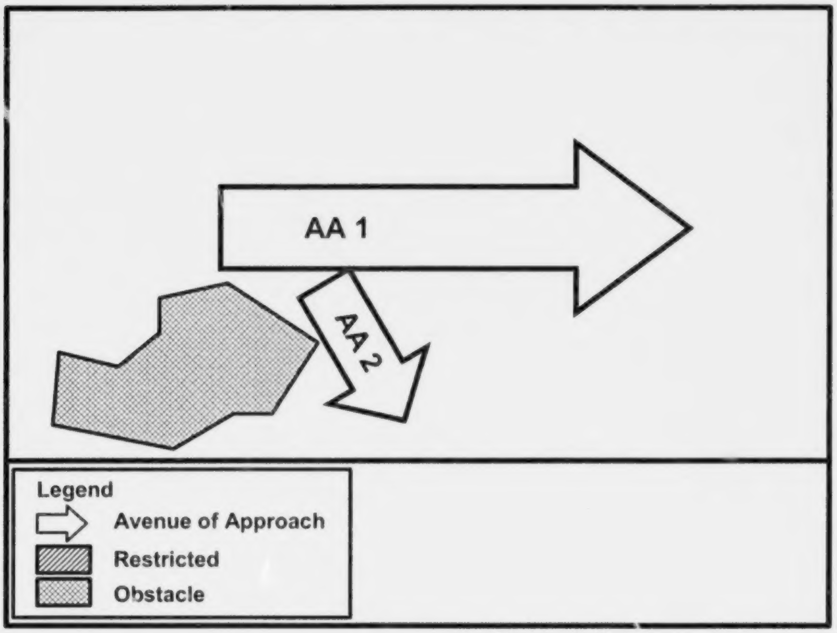


**Figure 2-24 Event Template**

19. During step four of the IPB process the G2 will assist the G3 and FSCC in developing the High Payoff Target List (HPTL) (see appendix to Annex B "Targeting" ). The list is developed based on the adversary ORBAT and the time the G2 anticipates seeing the targets during the battle.

20. The HPTL is determined by nominating priority targets from identified HVTs, which are the resources that the adversary commander requires for the successful completion of his mission. HPTs are those HVTs that must be acquired and successfully attacked for the success of the friendly commander's mission. At the operational level, HPT and HVT are related to the enemy's centre of gravity and decision points.

21. Wargaming occurs as a result of Step Four of the IPB process. Wargaming helps commanders and staffs visualise the flow of operations, refine and compare friendly COA and develop the detailed plan. Benefits of wargaming include:

a. identification of advantages, disadvantages and risks;

b. confirmation of decision points (DP's);

c. development of the DST, and

d. development of contingencies for unforeseen enemy actions

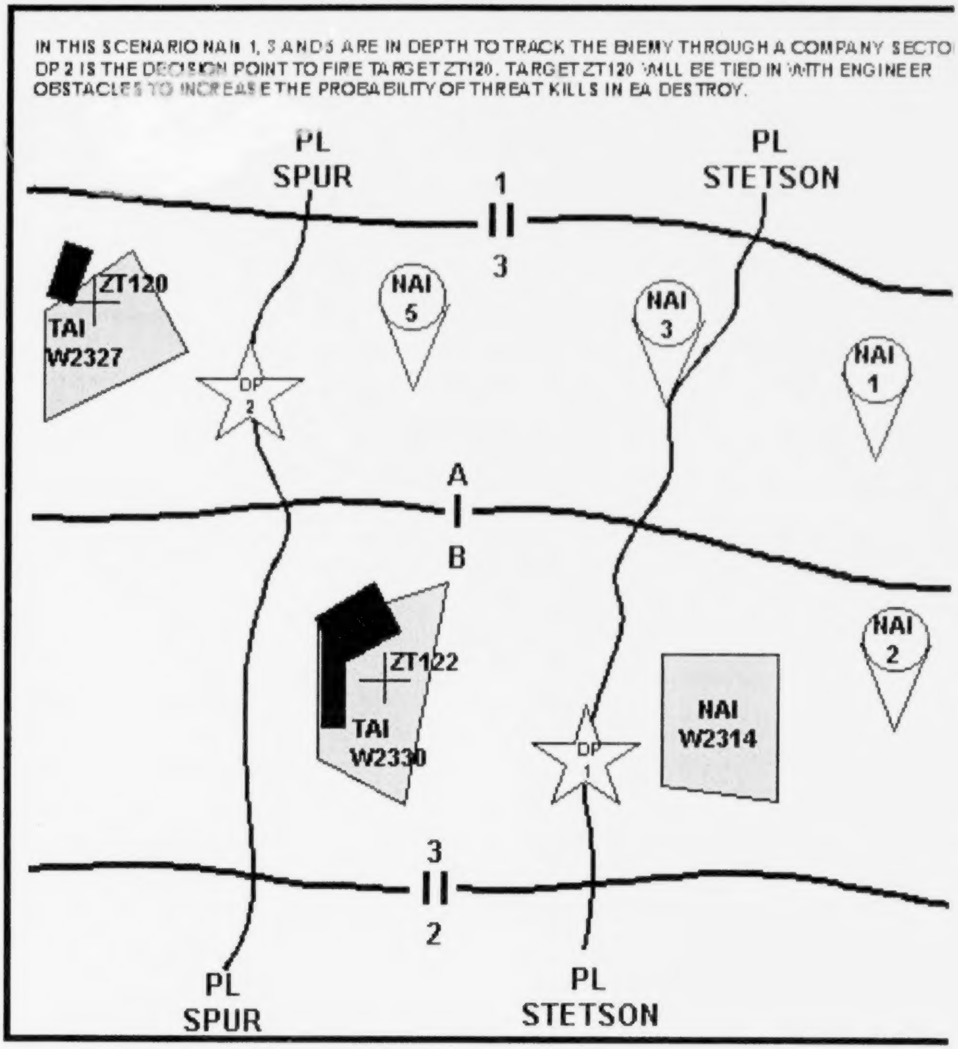
22. The strength of wargaming is that it reduces uncertainty by examining in detail the proposed friendly COAs against the enemy COAs determined through the IPB process. The end result of wargaming is the DST.

23. There are three basic techniques used to conduct wargaming:

a. **Avenue-in-Depth.** This technique focuses on one AA at a time. The battle is wargamed in sequence from the assembly area to the objective during the offence and throughout the main defensive area during the defence.

b. **Belt Technique.** This technique divides the AO into belts that run the width of the assigned sector correlating to phases of the operation. Each belt must contain at least one critical event. This is one of the most effective techniques because it analyses all the forces that effect specific events.

c. **Box or Event Technique.** This technique analyses a few critical areas or events. This technique is less time consuming and focuses on the most essential tasks and events.



IN THIS SCENARIO NAIs 1, 3 AND 5 ARE IN DEPTH TO TRACK THE ENEMY THROUGH A COMPANY SECTO
DP 2 IS THE DECISION POINT TO FIRE TARGET ZT120. TARGET ZT120 WILL BE TIED IN WITH ENGINEER OBSTACLES TO INCREASE THE PROBABILITY OF THREAT KILLS IN EA DESTROY.

PL
SPUR
1
3
PL
STETSON
ZT120
TAI
W2327
NAI
5
NAI
3
NAI
1
DP
2
A
B
NAI
2
ZT122
TAI
W2330
NAI
W2314
DP
1
3
2
PL
SPUR
PL
STETSON

Figure 2-25: Decision Support Template

**The Decision Support Template**. The DST is an operations staff product used in the war-gaming process which graphically represents decision points and projected situations, and indicates when, where, and under what conditions a decision is most likely to be required to initiate a specific activity or event. The DST receives significant input from and is co-ordinated with the ICP, as well as the ISTAR Plan, the AGM, and the Synchronization Matrix.

**The Intelligence Estimate**. The Intelligence Estimate[17] is a by- product of the IPB process. If required to do so, G2/IOs would use the products generated in the IPB process to create a graphical Intelligence Estimate. As explained in Chapter 2, it comprises a method of packaging and disseminating the results of IPB. As a minimum it should be distributed to the formation/unit commander, subordinate commanders, higher and flanking headquarters G2, staff and intelligence units. It could assist a commander to understand his battlespace and its dissemination helps to place the Commander's concept of operations in context to that of the adversary or threat. However, in the normal IPB process, these elements should become abundantly clear in the comparison of friendly and adversary COAs and the COA wargame. If needed, the Intelligence Estimate may be disseminated graphically or as a verbal briefing or both.

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[17] The format for an intelligence estimate is at FSOP 904.08

# APPENDIX 1 TO ANNEX B
# TERRAIN ANALYSIS: FLOCARK METHOD

1. TERA follows this process:

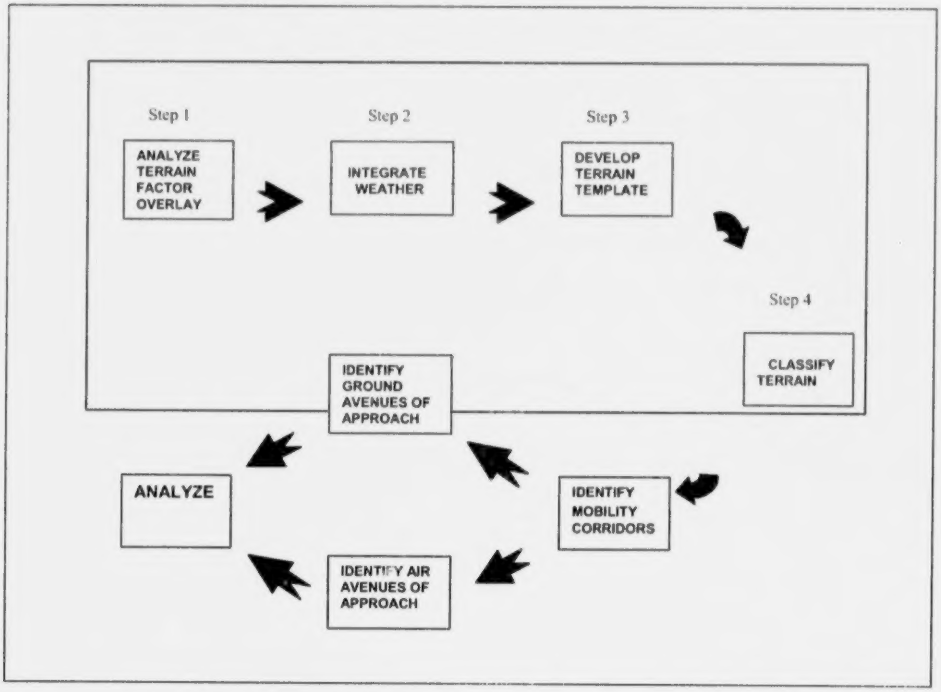

Step 1
ANALYZE TERRAIN FACTOR OVERLAY
Step 2
INTEGRATE WEATHER
Step 3
DEVELOP TERRAIN TEMPLATE
Step 4
CLASSIFY TERRAIN
IDENTIFY MOBILITY CORRIDORS
IDENTIFY GROUND AVENUES OF APPROACH
IDENTIFY AIR AVENUES OF APPROACH
ANALYZE

Figure 2-26: Terrain Analysis Process

2. In the LF, TERA will generally be done by using the FLOCARK method. It is important to note that TERA is a planning aid and does not replace physical reconnaissance. In the event of a major operation or large exercise a TERA team may augment a LF unit or formation. LF participating in combined operations will quite likely have access to allied forces' terrain factor overlays and to other tactical terrain analysis database (TTADB) terrain analysis products (TERAP).

3. FLOCARK stands for:

a. F - features;

b. L - lanes;

c. O - objectives;

d. C - canalising ground;

e. A - approaches;

f. R - rate AA; and

g. K – KT and vital ground.

## THE PROCESS

4. **Trace Preparations.** Use one trace for features, lanes, objectives and canalizing ground. Use a second trace for objectives (copy from first), AAs, rating AAs and locating KT /vital ground. This allows the second, cleaner trace to be used as a briefing aid.

5. The following colours are used to show different meanings. If there is any doubt use a legend:

| Colour | Meaning |
|---|---|
| Black | Built-up areas over 1 Kilometre across & other manmade obstacles |
| Blue | Water. Obstacles in all weather such as lakes use blue cross hatching and obstacles only in wet weather use blue diagonal lines (See Para 22 for example) |
| Green | Trees & restricted areas |
| Brown | Key terrain/vital ground |
| Red/Blue | Mobility corridors/ Avenues of approach for adversary forces who might have initiative |

**Figure 2-27: Colour Matrix**

6. When doing the ground analysis, think as the adversary would. How would he attack the position and what would he want to destroy or capture? Most commanders start by looking at the ground by saying I want to end here and then work backwards from there. This helps to establish the adversary's intent. FLOCARK is applied to the Forward Edge of the Battle Area (FEBA) that pertains to the friendly force commander. In the defence, the FEBA is the forward edge of the Main Defensive Area or in the case of the covering force it would be the forward edge of the screen/guard.

7. **Features.** Identify features along the FEBA that hinder or disrupt movement across it. Canalising features includes heavy wooded areas, built-up areas, slopes, swamps and rivers. Mark or highlight those features with cross-hatching or symbols on the FEBA where the adversary will be forced to change direction, negotiate or alter tempo.

8. **Lanes**. Identify lanes between the disruptive features at the FEBA and mark them. These are considered to be the initial approaches into a defended area. The width of each area must be accurately determined. This is weighed against the adversary's force structure with a view to determining his strength and if he is able to pass through the lanes and how they will be dispersed.

**Note**:

> Features and lanes *must* be looked at first, to focus on how to break into an adversary main defensive area or how to initially deny/allow adversary penetration into a friendly main defensive area.

9. The following table shows lanes for various units/formations:

| Organization | Frontage |
|---|---|
| Company | Up to 500 M |
| Battalion | 2-3 Km |
| Regiment/brigade | Up to 8 Km |
| Division | 20-25 Km |

**Figure 2-28: Unit/Formation Matrix**

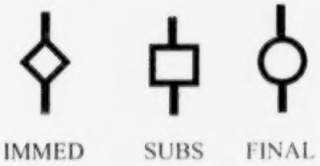
10. **Objectives**. Identify likely objectives, with the following as guidance:

a. Generic Enemy Force(GENFORCE) doctrine suggests the selection of immediate and subsequent objectives driving deep into a defensive area. As a general rule, the first echelon (ech) battalions (bns) have immediate objectives that will open the way through the FEBA for second echelon battalions. Subsequent objectives will be located near Brigade rear boundaries:

| Unit/formation | Immediate | Subsequent | Final |
|---|---|---|---|
| Red division | Blue battalion rear | Blue brigade rear | Blue division rear |
| Red regiment | Forward defence of blue battalion | Blue battalion rear | |
| Red battalion | Blue forward platoon and company strong points for continuation of attack | | |

**Figure 2-29: A Typical Adversary Division's Objectives**

b. Goose eggs are no longer used to define GENFORCE objectives. Lines are used to give the adversary commander more flexibility without tying him to a specific piece of ground. i.e.:


IMMED
SUBS
FINAL

**Note**:

These objective symbols are not doctrine, they are simply an example

11. **Canalizing Ground**. Identify ground in MDA that canalizes or disrupts movement through the area. Identify ground that hinders or restricts adversary tactical movement. Slopes, unstable soil, built-up areas and large waterways are typical examples. This must be done for the intelligence AI.

12. Canalizing ground is classified as unrestricted or having no impact on movement, restricted or severely restricted. Restricted means that units can pass through that terrain, but due to the nature of the terrain, the speed of manoeuvre will be substantially slowed. Severely restricted means ground over which manoeuvre by the type of force being considered is impractical.

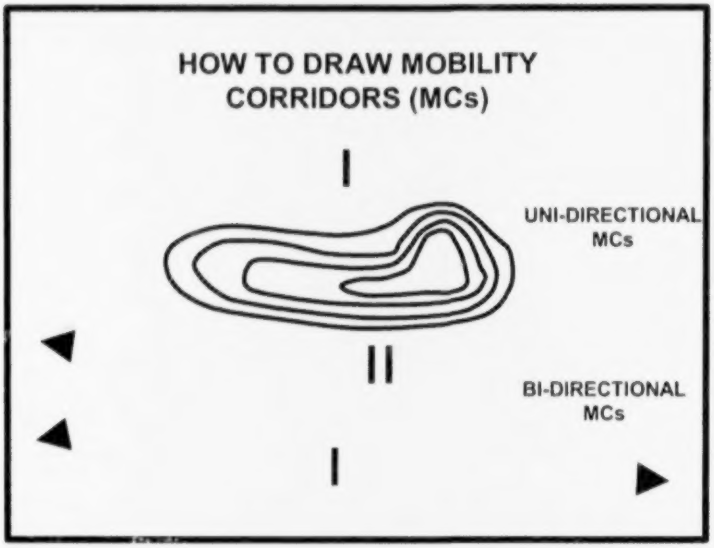

HOW TO DRAW MOBILITY CORRIDORS (MCs)
I
UNI-DIRECTIONAL MCs
II
BI-DIRECTIONAL MCs
I

**Figure 2-30: Mobility Corridors**

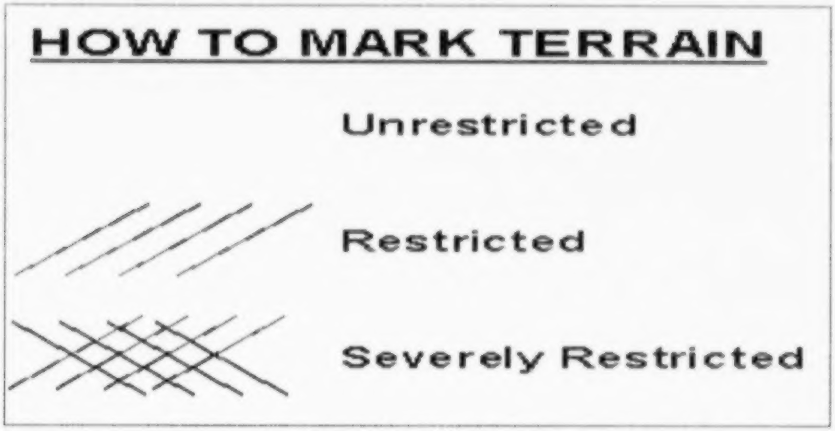


**Figure 2-31: Marking of Terrain**

13. The following points should be kept in mind:

a. Built-up areas - those larger than one kilometre square or those that cannot be by-passed on both sides;

b. Water obstacles –in a specific operation these may be determined by own and adversary assault crossing and bridging capability. In general, rivers, streams and any other water obstacles that cannot be crossed with an Armoured Vehicle Launching Bridge (AVLB) and with features which would cause significant delay by other means, such as with vertical banks higher than 1.2 m, current stronger than 1.5 meters per second or depths greater than 1.2 meters;

c. Slopes - in excess of 50 per cent up hill;

d. Woods - trees greater than 15 centimetres thick with less than 5 meter spacing;

e. Obstacles - minefields, tank ditches and abatis obstacles are considered as severely restricted.

14. Severely restricted terrain to an armoured or mechanised formation may be unrestricted terrain to lightly equipped forces. Severely restricted

terrain does not mean that all movement through an area will be completely prevented.

15. **Avenues of Approach.** AA are drawn for the side which has the initiative. In the offence, the intelligence staff can identify likely friendly AA and recommend them to the operations staff. Adversary counter-moves regarding AA can be identified as well. In the defence, adversary AA can be identified and friendly AA for counter-moves can be recommended. A viable AA will contain at least two MCs provided they are close enough together. A MC is a relatively open area through which a unit, in a formation, can manoeuvre. When plotting MCs remember to think one level up and two down. (i.e. for a battalion, plot MCs for Motor Rifle Regiments (MRR) and down to Platoon.

16. Ideal widths for MCs are as follows:

| Organization | Width |
|---|---|
| Platoon | Up to 300 meters |
| Company | Up to 500 meters |
| Battalion | .5 – 1 kilometers |
| Regiment/Brigade | 2 – 3 kilometers |
| Division | 4 - 10 kilometers |

**Figure 2-32: Mobility Corridors**

17. The maximum acceptable separation between MC to be included as an AA is as follows:

| Avenues of Approach | Mobility Corridors | Maximum Separation |
|---|---|---|
| Division | Brigade/Regiment | 10 kilometres |
| Regiment/Brigade | Battalion | 6 kilometres |
| Battalion | Company | 2 kilometres |

**Figure 2-33: Avenues of Approach**

18. An AA contains two MCs so that if a force is moving on one, and it has to stop, it can continue moving on another MC within the AA. Use

the results of the first four steps to plot AA. All avenues, including flank ones, must be plotted by extending all lanes identified along the most direct routes, crossing the least hindering terrain. AA are also extended to the adversary's present location or FEBA. They are then extended forward to likely adversary objectives and then through the depth of the friendly sector to deeper objectives. Note that AA might include some canalizing ground although the units using them would of course move more slowly.

19. **Identifying Air Avenues of Approach**. As is the case with ground troops, aircraft, both rotary and fixed wing, also employ AA. These are the routes that provide aircraft, airborne, or air assault forces a suitable approach to the target or objective. Inevitably they will be particularly prone to the effects of weather but this is not be considered at this stage. Detailed analysis will require specialist air, aviation and air defence advice.

20. **Rate** - AA and objectives are rated in order of efficiency from the adversary point of view. This step requires some technical judgement in refining, defining and eliminating AA based on the adversary situation and tactics. Examples of AA that may be eliminated are those that require major turning moves, those that are subjected to many checkpoints or those that do not lead to key terrain or objectives. As approaches are eliminated, the adversary may be faced with hindering terrain on the remaining AA and new objectives may be revealed.

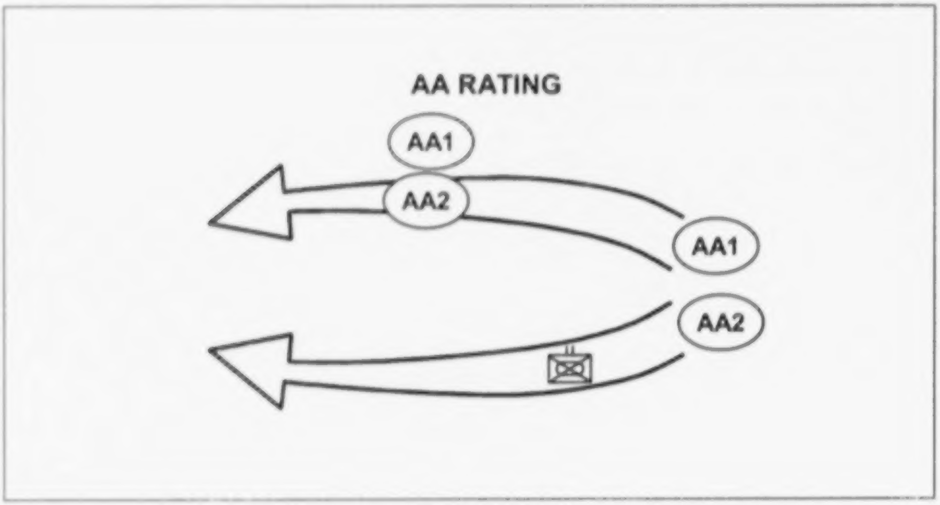


**Figure 2-34: Rating Avenues of Approach**

21. Rating approaches includes determining the size of the adversary force that each AA will accommodate. It is possible to rate the AA from

the most dangerous to the least dangerous in terms of manoeuvre space, hindering terrain and direction to objectives. This step will reveal the courses open to the adversary in some order of priority. Relative merits of observation, fire positions, cover and concealment and width must be compared to adversary doctrine to assess the strongest adversary force that can manoeuvre on each AA throughout its length. The width of the approach is best determined in the vicinity of the FEBA where the adversary is most likely to be in his breakthrough formation. Once adversary unit sizes have been assigned to each AA, adversary force boundaries can be predicted, as can the most likely location of his second ech and follow-on forces. As a result of having rated the AA, likely objectives may be added, adjusted, or possibly dropped.

22. **Key Terrain and Vital Ground.** Identification of adversary objectives and his AA will lead to identification of KT and vital ground. KT is ground that offers a tactical advantage. KT selected will provide either of the opposing forces with tactical advantage along the approach. The size of the final AA can now be determined as battalion, regiment or division axes. This step will also lead commanders to the vitalground, which will lead to other operational decisions, such as deployment and may lead to additional assessments of the adversary intentions and reactions to our forces. Vital ground is ground which must be controlled for a force to successfully continue to operate in that area.

23. At a minimum, ground analysis will give AA and a description of them, KT and/or dominating ground, obstacles, the three types of ground, NAI and TAI (Killing Zones (KZ)), usable routes, Landing Zones(LZ)/Drop Zones (DZ)/pick-up zones and Artillery Manoeuvre Areas (AMA).

24. NAI are geographical areas identified as likely areas to collect information-they usually indicate an adversary Decision Point. There are two kinds of NAI; point and area NAI. They can be recorded at this point on a working talc or electronic map, showing the intelligence AI.

## APPENDIX 2 TO ANNEX B

| SER | HEADING | FACTORS | REMARKS |
|---|---|---|---|
| 1 | INTRO | - Secur classification<br>- Correct as of<br>- Map orientation | - Christening the ground can also be done if required |
| 2 | REVIEW OF MSN AND INTENTIONS OF OWN FORCES | - Commander's mission restated<br>– Int problem stated<br>– Commander's initial PIRs restated | - Possibly done by Ops staff either before or after |
| 3 | REVIEW ADVERSARY CURRENT SIT | - Current disposition of known adversary forces<br>– Likely adversary wider aims | |
| 4 | SIGNIFICANT FACTORS OF ADVERSARY CAPABILITIES | - Summary of terrain analysis<br>– Summary of weather analysis<br>– Summary of threat analysis | - Significant deductions only that will have a large impact on Op Plans<br>- Be prepared to use terrain analysis overlay<br>- Highlight significant enemy eqpt, ORBAT and tactics |
| 5 | ADVERSARY COA | - COAs Listed<br>– Advantages & disadvantages stated for each | - COAs should be limited to min 2 and max 5 for simplicity<br>- *'Most dangerous'* and *'Most likely'* COAs to be clearly identified |
| 6 | ADVERSARY'S MOST PROBABLE COA & PLAN | - Select a COA and elaborate on broad concept of ops & general execution | |
| 7 | ADVERSARY VULNERABILITIES | - Highlight vulnerabilities of adversary capabilities that commander can capitalize on | |
| 8 | HVTs | - Highlight HVTs in general or per COA | - Listed in order of priority for targeting |
| 9 | PIRs | - Confirm PIRs, incl new or changes | |

**Figure 2-35: Intelligence Estimate-Oral Briefing Format**

25. **Tips:**

a. Ideal time: maximum ten min(it is better to be short and memorable rather than long and forgotten);

b. Sometimes scripted but always well rehearsed;

c. Always given by G2 - never delegated;

d. Usually preceded by intro from the Commander or G3;

e. Maximum use of simple graphics, maps and overlays; Prepare a separate copy of HVTs and PIRs for commander's review;

f. Avoid map clutter, sounds, action graphics, and use large, clear, readable map symbols; and

g. Be prepared for in-depth questions.

# ANNEX C TO CHAPTER 2
# INTELLIGENCE SURVEILLANCE TARGET ACQUISITION AND RECONNAISSANCE PLANNING[18]

1. Overall intelligence collection planning is covered in ABCA QSTAG 1088. This annex presents the planning steps for effective ISTAR operations. The objective of ISTAR planning is to collect information about the adversary that will allow the Commander achieve information superiority and ultimately defeat his adversary. The ISTAR plan will co-ordinate the efforts of all available information collection resources into one collection effort. There are two parts to an ISTAR planthe ISTAR matrix and the ISTAR overlay. Each will be addressed in detail within this annex. The ISTAR planning process includes:

a. determining requirements;

b. assigning priorities;

c. developing the plan;

d. collecting;

e. processing, and

f. redirecting collection resources.

2. The G2 must understand the mission and the Commander's intent. After reviewing the mission the G2 will discover critical pieces of adversary information that are needed to ensure the success of the mission. Key issues about the adversary that are not known are developed into PIRs. Unknown information about the adversary which is considered critical but not key will be nominated as IR. Generally, the Commander will state or the G2 will recommend key issues as PIRs. PIRs ask a single question and are quite often tied to decision points on the battlefield. PIR's are specific questions such as: ' Where, when, and in what strength will the enemy cross the NAAB River? '

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[18] Taken from ABCA QSTAG 1034, *Intelligence Preparation of the Battlefield* and adapted with updates from Canadian doctrine.

3. The ISTAR plan is primarily directed towards answering the IRs first and subsequently PIRs. At Brigade and Battalion the G2/IO is the driving force for the ISTAR effort. Intelligence officers must understand which collection resources are available and their capabilities to collect information. In addition to organic or attached collection resources, the G2 must also be familiar with the collection plan of higher echelons that may provide redundant or additional collection effort. G2s use their knowledge of adversary doctrine to identify the threat indicators on which ISTAR resources will focus their collection efforts. These threat indicators will aid in providing answers to the PIRs/IRs. As they are answered, the G2 provides the necessary ASA that will aid the Commander to understand the battlespace. The Commander then develops his BV in order to exert his influence; shape the battlefield; disrupt the operational tempo of his adversary and ultimately achieve success.

4. To focus the collection effort in terms of planning, the G2 analyses various overlays, individually and collectively, such as

a. MCOO;

b. Situational Template;

c. Most probable adversary COA, and

d. Event Template.

5. The overlays will allow the G2 to assess which routes the adversary is likely to use and when they will most likely use them. The G2 uses all tools available including overlays, reports, simulation, modelling and wargaming to focus the collection effort.

### ISTAR MATRIX(UNIT LEVEL)

| Serial | NAI | Location | Description | Event | Indicator | Report Period | Responsibility | Remarks |
|---|---|---|---|---|---|---|---|---|
| 1 |  | NV2944 to NV2230 | PL DUKE | Recce | BRDM2 | H-10 | Recce Pl | Woodline to East |
| 2 |  | NV1635 | Ravine | Recce | BRDM2 | H-10 | Ptl 1A M Coy |  |
| 3 |  | NV1732 | Defilade | Recce | BRDM2 | H-10 | Ptl 2A O Coy |  |
| 4 | W1003 | NV2240 | Grassy knoll | Recce | BRDM2 | H+3 | N Coy |  |
| 5 |  | NV2631 | Entrance to defile and house | Recce | BRDM2/T-72 | H+2 | O Coy | Only on order |
| 6 | W1005 | NV3030 | Road | Recce | BRDM 2/T-72 | H+1 | UAV M120 | Re-inforcements from SE |
|  |  |  |  |  |  |  |  |  |

### ISTAR MATRIX EXAMPLE(FMN LEVEL)

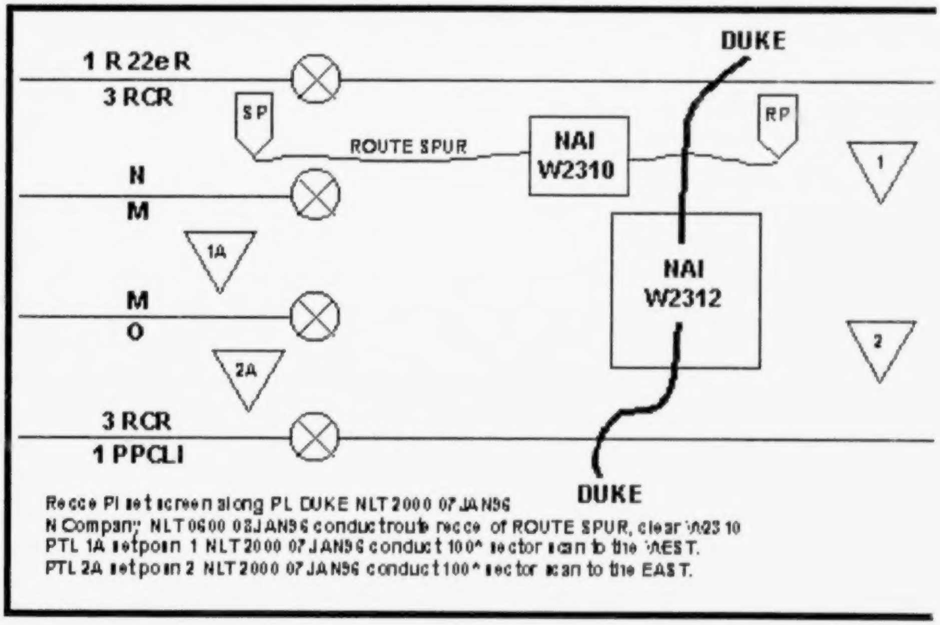
| Serial | NAI | Location | Description | Event | Indicator | Report Period | Responsibility | Remarks |
|---|---|---|---|---|---|---|---|---|
| 1 | W1000 | NV3732 | RIVER ASTRIX | Recce | BRDM2/T-72 | H-6 | 1R22eR |  |
| 2 | W1002 | NV3329 | Bridge and houses | Recce | BRDM2/T-72 | H-6 | 1R22eR |  |
| 3 | W1003 | NV2240 | Grassy knoll | Recce | BRDM2 | H+3 | 3RCR |  |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4 | W1004 | NV2545 | Crossroads and houses | Recce | BRDM2/T-72 | HHr | UAV M120 | Includes SE approach from RACKSVILLE NV 4129 |
| 5 | W1005 | NV3030 | Road | Recce | BRDM2/T-72 | H+1 | UAV M120 | 3RCR mission H+1 to H+2 |
| 6 | W1006 | NV2026 | Ravine and area to bridge | Recce | MTLB/Engr vehs | H+3 | UAV M120 | 1PPCLI area |
| 7 | W1007 | NV2133 | Crossroads and houses | Recce | MTLB/Engr vehs | H+3 | 1PPCLI | |
| 8 | W1008 | NV1929 | Church and houses | Recce | MTLB/BTR 80 | H+4 | 1PPCLI | |
| 9 | W1009 | NV3627 | Autobahn | Recce | T-72/BTR 80 | H+5 | UAV M121 | Potential C-atk force |
| 10 | W1010 | NV4529 | Kaserne | Surv | T-72/BTR 80 Comd variants | H+5 | EWCC | As per IR#13 |
| 11 | W1011 | NV3544 to NV2632 | NE approach | Surv | BRDM2/T-72 | H+1 | Recce Sqn | As per IR#12. OPO states no move before H-6 |

FIGURE 2-36 - ISTAR MATRIX EXAMPLE

6. The ISTAR matrix will show which NAI have redundant coverage and when to cue resources to provide the best possible coverage. The ISTAR matrix allows the Commander and the G2 to track collection resources. For example, the Commander can determine which resources are focused on which NAI; what the priority of collection effort is during each phase of the battle; when collection resources are active; co-ordinating instructions for collection resources; and specific reporting instructions.

7. As the ISTAR matrix may be as simple as an expanded ICP, the ISTAR overlay is a graphical representation of the ICP. The ISTAR overlay will give the Commander and G2 a visual representation. Additionally, it will show gaps in the ICP and may identify areas that may be vulnerable to adversary reconnaissance. In addition, the marginal data to the overlay includes administrative data, which would normally contain instructions for the collection resources.


1 R 22e R
3 RCR
SP
ROUTE SPUR
NAI
W2310
RP
DUKE
1
N
M
1A
NAI
W2312
M
O
2A
2
3 RCR
1 PPCLI
DUKE

Recce Pl set screen along PL DUKE NLT 2000 07JAN96
N Company NLT 0600 08JAN96 conduct route recce of ROUTE SPUR, clear W2310
PTL 1A setpoint 1 NLT 2000 07JAN96 conduct 100^ sector scan to the WEST.
PTL 2A setpoint 2 NLT 2000 07JAN96 conduct 100^ sector scan to the EAST.

**Figure 2-37: ISTAR Overlay**

8. Once an event is confirmed or denied, or an IR answered, the G2 should consider repositioning the collection resources to improve survivability and or collection focus.

9. Fundamentals for a successful ISTAR plan are:

a. Early dissemination saves lives. The sooner the collection resources are out looking, the more time they have to find what they are looking for. Do not wait.

b. Focus the ISTAR plan by telling the collection resources, what time the threat is expected, where the threat is expected and what the threat will look like.

c. Depth and redundancy; conduct reconnaissance in depth to improve coverage and whenever possible have more than one set of eyes on an NAI.

d. Collection resources can not always be active. Tell collection assets when to be active.

e. Do not over task collection resources. The aim is to achieve the best collection synergy with economy of effort.

f. Select the right assets for each requirement.

g. Use all resources available. Whenever possible request collection coverage from higher echelons. Never neglect the collection capability of organic resources. Drivers on logistic runs, maintenance personnel and even cooks can provide vital information. Remember, every soldier has a set of eyes and ears and is therefore a potential collection resource.

In summary, in the Information Age, ISTAR stands to benefit greatly from the potential for achieving unheard of levels of collection synergy. In turn, these rapid developments in the co-ordination and $C^2$ of ISTAR assets in terms of both terrain management and the exploitation of collection capabilities will present new challenges to intelligence staffs and result in many changes to organizations and procedures.[19]

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[19] See B-GL-352-001/FP-001 for detailed information on ISTAR doctrine.

# CHAPTER 3
# SOURCES AND AGENCIES

*Many Intelligence reports in war are contradictory; even more are false, and most are uncertain.*

*Carl Von Clausewitz (1780-1831)*

*Military Intelligence is not, in fact, the spectacular service of the common imagining, but a much more prosaic affair, dependent on an efficient machinery for collecting and evaluating every sort of item of information –machinery that extends from the front-line right back to Supreme Headquarters. When the mass of information has been collected, the art is to sift the wheat from the chaff, and then to lay before the Commander a short clear statement.*

*Field Marshal Earl Alexander 1961*

## SECTION 1
## INTRODUCTION

### GENERAL

1. Following discussion of the nature of intelligence, the operating environment and organization (the intelligence cycle and ISTAR), it is necessary to understand the sources and agencies which must be acquired, directed and exploited to answer a commander's PIRs

2. **Definitions.** The following definitions are critical to an understanding of the meaning, capabilities, and limitations of sources and agencies:

a. **Source**. A source is a person from whom, or a thing from which information is obtained. Sources may be:

(1) **Controlled**. Controlled sources and agencies are those which can be tasked to provide answers to questions;

(2) **Uncontrolled**. These are sources which provide information but over which no control can be exerted. This category includes newspapers, maps, trade journals, and news bulletins and some HUMINT sources;

(3) **Open**. An open source is a type of uncontrolled source which provides basic and/or current information to the public at large; and

(4) **Casual**. A casual source is an individual who volunteers information to an information collector without being requested to do so;

b. **Agency**. An agency is an organisation or individual engaged in collecting and processing information, and disseminating information and/or intelligence;

c. **Active Sensors**. Active sensors, such as radars, are a type of source which emit signals detectable by adversary forces;

d. **Passive Sensors**. Passive sensors, such as illumination intensification devices, are a type of source which do not emit detectable signals;

e. **Real Time Information**. "Real time" implies that there are no noticeable delays between the acquisition of information and its transmission to analysts. Analysts watching a video transmission of a convoy crossing a bridge at the exact time the convoy is crossing the bridge are watching "real-time" imagery;

f. **Near Real Time Information**. Information or intelligence that is "near real-time" has been slightly delayed by the time required for electronic communications, automatic data processing, and perhaps first level analysis or editing at a Ground Control Station(GCS); and

g. **Single-Source Analysis**. Single-source analysis is just that, analysis from a single source. It is much preferable to obtain analysis from more than one source so that a balanced evaluation and interpretation can be made. For more details, refer to Chapters 1 and 7.

## SECTION 2
## THE MEANS

### SELECTION OF SOURCES AND AGENCIES

3. When preparing an ICP, intelligence staffs normally rely on controlled sources and agencies to obtain required information within a specified time. Although information from uncontrolled sources can also be of great value, such information is always treated with caution until it has been verified during the evaluation stage of the Intelligence Cycle.

4. **Disciplines**. Sources are categorised based on the broad method by which their information is collected. Information derived from one method or type of source, when processed, becomes intelligence of a specific kind. These categories are HUMINT, IMINT, SIGINT, and TECHINT. Each one of these disciplines demands personnel with skill sets that require a specialised focus in training and practice. Additionally, by virtue of the present and future information culture, Open Source Intelligence (OSINT) is now an important consideration. OSINT may be applied to the other disciplines because there is so much available in the public domain today that formerly would have been classified. OSINT involves what has been termed 'data mining' and relies on skills similar to those required for university level academic study and research. In the end, however, Intelligence personnel are best able and qualified to process open source material, only because the OSINT will have to be compared and analysed in relation to information and intelligence from classified sources to determine its value.

## METHODS AND TECHNIQUES

5. The methods and techniques for collecting combat information may be grouped under the following general headings:

- a. **ISTAR**. The systematic, co-ordinated collection and processing of information by active and passive means, for example:
    - (1) aided or unaided human vision and hearing, by day or night;
    - (2) ground based and airborne radar systems;
    - (3) intercepted communications and electronic emissions; and
    - (4) imagery collection from ground based, airborne and overhead platforms;
- b. **Interrogation, Debriefing and Exploitation**. This includes:
    - (1) interrogating or questioning captured or surrendered personnel, refugees, stragglers, defectors, and detainees;
    - (2) debriefing friendly forces including patrols and returned Prisoners of War (PW);
    - (3) examining adversary force equipment, stores, and documents; and
    - (4) examining open source publications and other materials such as video and web sites;
- c. **Espionage**. While this is not a technique employed by the CF, as an adversary's activity, it must be of concern to Canadian CI personnel in an AO. Potential coalition partners in future operations may field this capability and

therefore combat intelligence personnel need to understand it. There are two principal approaches:

(1) the use of trained agents sent to the target country; and

(2) the use of agents and informants recruited in the target country who might act as "line crossers", e.g. persons who voluntarily pose as refugees and are debriefed upon their return to adversary lines. Other "line crossers" might remain in friendly force areas to conduct clandestine operations.

## SECTION 3
## SOURCES

### GENERAL

6. For intelligence staffs to be able to produce intelligence for their commanders, information from a variety of sources must be obtained and processed. For the seamless intelligence architecture to work effectively, combat information must flow rapidly upwards from unit collection resources so that combat and other types of intelligence can flow downward or be readily accessed in a 'smart pull' symbiosis.

7. **Rear and Depth Areas**. Intelligence staffs at Brigade/Brigade Group and higher have access to a variety of controlled sources: interrogators, HUMINT debriefers, imagery analysts, higher-level intelligence staffs, CI teams, meteorology specialists, etc. These personnel and resources provide an excellent understanding of battlefield conditions and adversary activities in rear and depth areas of the battlefield, but often only a limited understanding of conditions along the Forward Line of Own Troops (FLOT).

8. **Troops in contact**. In order to gain a comprehensive understanding of environmental conditions and adversary activities along the FLOT, combat information sources controlled at unit level must be effectively linked for their vital information to be processed by higher-level intelligence staffs in a timely manner. Without input from unit-controlled

sources, assessments produced by intelligence staffs at Brigade and Division lose their relevancy and usefullness to units and commander alike.

## HUMINT SOURCES[20]

9. HUMINT is derived through the processing of information provided by human sources. In the combat intelligence system, most of the combat information received by intelligence staffs is from reports made about routine observations and from reports prepared by information collectors completing their assigned information gathering tasks. Forward-located troops employ patrols, forward observation officers (FOOs), observation posts (OPs) and surveillance devices which allow stand-off coverage and provide time for information to be processed into intelligence before the Commander must take action[21].

10. **Principal HUMINT Sources**. The principal HUMINT sources relying upon in the combat intelligence system at the higher levels of operations within the spectrum of conflict include:

a. **Reconnaissance Troops**. All units have information collection capabilities. Reconnaissance troops are specifically organised and equipped to collect tactical information by observation. Their means include highly sophisticated electro-optical (EO) devices on board the Coyote reconnaissance vehicle. These activities are co-ordinated through the ISTAR plan. Both intelligence and operations staffs participate in reconnaissance planning;

b. **Forward Troops**. These troops include infantry, armour, field artillery (battery commanders (BCs) and FOOS), air defence artillery and combat engineer elements; and

c. **Support and Rear Area Troops**. While reconnaissance and forward troops report extensively on opposing force activities, rear area units report battlefield conditions and adversary activities within their areas of responsibility. The threat to rear areas can include air and artillery strikes, special forces activities, heliborne and airborne operations, and attacks by adversary forces attempting to seize vital communication/ transportation points.

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[20] HUMINT doctrine will be covered in detail in B_GL-357-002/FP-001 HUMINT - to be published and is covered in some detail in Chap 4.

11. **Other Important Sources**. Uncontrolled sources which provide valuable combat information, , include:

a. **Prisoners of War and Deserters**. PWs and deserters can provide valuable information on adversary capabilities, intentions, unit identifications, locations, combat effectiveness, personalities, and logistic status. Information collected through PW exploitation can be extremely timely and valuable, however it must be carefully evaluated in its context as a single source. The handling of PWs is detailed at Chapter 4;

b. **Informers, Agents and Line Crossers**. Informers are usually casual suppliers of information whose motives, and information quality quite often vary. As with all HUMINT sources they must be carefully controlled and handled by qualified specialists; and

c. **Local Civilians, Displaced Persons and Refugees**. Local civilians, displaced persons and refugees who have been within adversary-controlled areas are important sources of information At every opportunity, HUMINT personnel screen civilians from adversary-controlled areas who are willing to divulge information. An additional task is to screen out potential adversary combatants who might be hiding amongst the refugees. If recognized as official combatants, they would then need to be processed as PWs. Overall, however, although the information collected needs to be confirmed by other sources, it has the potential to be of important tactical value and even more. HUMINT debriefing is detailed at Chapter 10.

## IMINT SOURCES

12. IMINT is obtained from the analysis of imagery produced electronically or from film using an optical sensor system. Imagery is used in terrain evaluation, targeting, battle damage assessments, the identification of adversary deployments and activities, and to assist in preparing adversary ORBAT records.

13. Whether sensors are mounted on surface, airborne or space- based platforms, IMINT sources provide a "snapshot" in time which, when analysed and compared with previous or subsequent imagery, reveal the activities and possible intentions of adversary forces. Unfortunately, imagery use and reliability are affected by adverse weather, the effects of camouflage and masking foliage, battlefield smoke, and adversary deception practices.

14. **Types of Sensors**. A variety of imagery producing sensors are available. Some sensors provide "real-time" imagery, while others require retrieval of the sensor package or return of the sensor platform prior to processing. Examples of sensors which produce imagery include:

a. **Optical Cameras**. Cameras may use black and white, colour and infra-red or false colour film;

b. **Infra-Red.** – Infra-red devices include Infra-red Line Scan (IRLS), Forward Looking Infra-red (FLIR), and Thermal Imagery sensors;

c. **Radars**. These include Side-Looking Airborne Radar (SLAR), elevated search radars, Synthetic Aperture Radars (SAR), Moving Target Indicators, and doppler radars;

d. **Video and Low-light Television**; and

e. **Laser Detection and Range Finding (LADAR) Devices**.

15. **Sensor Platforms**. Sensors are typically mounted on:

a. Unmanned Aerial Vehicles (UAV), such as drones or Remotely-piloted Vehicles (RPV), equipped with EO sensor systems linked to Ground Control Stations (GCS);

b. reconnaissance aircraft and helicopters;

c. vehicle-mounted ground reconnaissance resources, e.g. COYOTE; and

d. remotely-employed sensors (REMS).

16. Detailed imagery interpretation is a specialist function. However, photo reading and a general awareness of the capabilities and limitations of imagery are fundamental skills shared by most intelligence analysts. Further details on IMINT are found at Chapter 5.

## SIGINT SOURCES

17. Intercepted adversary communications and other electronic emissions provide information on types, identifications, locations, dispositions of adversary forces, their future operations and sometimes the extent of adversary knowledge of friendly forces. Despite the use of codes and speech privacy devices which may protect the actual information being passed between adversary elements, the mere knowledge of a signals emission can significantly contribute to an intelligence analyst's understanding of the situation. Signal interception is performed by Electronic Warfare (EW) units, as explained at Chapter 6. EW is a valuable battlefield collector, capable of producing single source intelligence(eg. SIGINT), not just combat information.

## TECHINT SOURCES

18. The sources that are typically exploited for technical information include:

a. captured equipment (CE);

b. captured documents (CD);

c. defectors, agents, civilians and PWs;

d. imagery; and

e. emissions, effects, and residue from adversary weapon systems and other equipment.

19. **Documentary Intelligence (DOCINT)**. DOCINT is gained from the analysis of CD and the assessment of information derived from various published material or the broadcasting media. Relevant material may also be gathered from unpublished sources.

20. **Measurements and Signatures Intelligence (MASINT).** MASINT is the scientific and TECHINT derived from the quantitative and qualitative analysis of data obtained by specific technical sensor systems. (See Chapter 1- Categories of Intelligence).

## SECTION 4
## AGENCIES

### GENERAL

21. Agencies produce and provide intelligence, as well as information. Agencies may task sources to collect information, or may be the passive recipients of information to analyse.

### NATIONAL-LEVEL/STRATEGIC AGENCIES

22. National-level agencies normally collect information from a variety of sources belonging to one or more disciplines. Much of this information and intelligence is readily if not immediately available to intelligence staffs and units deployed on operations. For information and intelligence, these agencies rely on:

a. sources, such as ships, aircraft, satellites, ground stations, and agents; and

b. other agencies, such as intelligence staffs of other federal departments, and allied agencies.

23. National-level agencies are particularly important providers of intelligence products derived from national and allied SIGINT, IMINT and TECHINT information.

## COMBAT INTELLIGENCE SYSTEM AGENCIES

24. **The All Source Cell.** The ASC is the agreed term[22] for what had been called in Canada the Intelligence Collection and Analysis Centre (ICAC). The ASC is the principle agency that supports the intelligence production function within a Canadian formation. This concept emerged from the combat development studies of the early 1980s and has evolved substantially since then. Essentially, as field formations have gained sensors, which gather more information, an agency had to be developed to implement the ICP and process the information. The ASC is generally provided by a formation intelligence unit, however, it works in support of the G2 and will normally be in relative close proximity. It is also a most useful site to position intelligence liaison officers (LOs) and sensor ground stations or Tactical Control Systems (TCS). In formations or units that have no organic intelligence line unit but require enhanced collection and processing means, as in OOTW, it is often necessary to provide an ASC sub-element under operational command (OPCOM), or to expand the relative G2 staff to form one. Experience indicates that it is best to separate staff and line responsibilities, insofar that an ASC normally comprises a significant number of people and vehicles, and can affect the size and physical footprint of a formation HQ. With sufficient connectivity and access, the ASC should be physically remoted from the HQ. However, it should be noted that the G2 requires the ASC to be in his 'hip pocket' during the IPB process and that the focus for sensor management and processing will be in the ASC or in a related ISTAR CC when they are deployed. The table of organisation and equipment (TO &E) of an intelligence unit is listed in the LF Electronic Battle Box. What is shown is no more than a model and it should be remembered that capabilities such as those of an ASC are modular in scope and can be readily altered to meet changing requirements.

25. **Terrain Analysis Sections**. The TERA Sections in the intelligence units found at Division and Corps, and within the HQ Squadron of a combat engineer regiment (CER) at Brigade, collect, analyse and evaluate geographic information on natural and man-made features. This activity provides commanders with information and assessments on the effect of terrain on both friendly and adversary force operations. A TERA section would normally be found inside an ASC.

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[22] QSTAG 1093 *The All Source Cell* is now used by all participating armies.

26. **Engineer Units**. Engineer intelligence is that knowledge of the adversary, weather and terrain features required by an engineer commander to plan and execute engineer operations. It is also forms an important part of the all-source intelligence that is provided by the G2 to the formation commander. The sources and agencies used by engineers include air reconnaissance resources, engineer reconnaissance elements, and multi-source intelligence products provided through the combat intelligence system.

27. Engineer units maintain the mobility of friendly forces and deny the same to adversary forces. The nature of this work necessitates the maintenance of the following databases:

a. topography, which includes:

    (1) terrain - obstacles, going, cover, water supply, surface and sub-surface geology;

    (2) waterways - width, depth, current, bed, banks, ice, crossing points, bridges, fords and dams;

    (3) beaches and coastlines - tides and water depth;

    (4) flooding - actual and potential;

    (5) roads and railways - capacities and restrictions;

    (6) airfields - existing, proposed and possible; and

    (7) engineer resources - water supply, stocks of material, gas, sewage, electricity, labour, and construction equipment;

b. climate;

c. communications;

d. local resources; and

e. adversary engineer equipment and installations.

28. **Fire Support Co-ordination Centre.** A FSCC is located at the HQ of each level of command from Corps to Brigade and, potentially, to Battle Group. Although the G2 at each formation HQ is responsible for preparing the formation ISTAR Plan, the FSCC is an important focal point for the gathering of information pertaining to ISTAR. The extensive TA resources of the artillery feed directly into the FSCC, where combat information is prioritised and used to task fire support missions. The TA collectors available to the FSCC are:

a. forward observers (BC parties, FOOs);

b. observation posts;

c. aerial observers;

d. allied UAVs;

e. sound ranging devices; and

f. weapon locating radars.

29. These collection resources serving the FSCC are primarily concerned with TA and counter-battery (CB) fire, however the acquisition and analysis capability of the FSCC make it an excellent provider of combat information. The flow of combat information and intelligence between a formation's FSCC and G2 staff is assisted by the efforts of the artillery intelligence officer (AIO) in the ASC.

30. **Tactical Air Control Parties/Tactical Aviation Intelligence Staffs**. Tactical Air Control Parties (TACPs) are located at the HQ of each level of command from Corps to Brigade. They are responsible for tactical air support and airspace management at their respective level of command. The tasking of reconnaissance sorties and the provision of information resulting from sorties is conducted though this cell. The HQ of the tactical aviation unit placed in support of the formation is another agency that can provide combat information and intelligence derived from aerial platforms. Close liaison by the formation G2 with the TACP and relative intelligence staffs of supporting aviation units is essential to ensure that information and intelligence of mutual interest are shared.

31. **EW Units**. At Corps, Division, and Brigade Group, integral EW units collect, process, and disseminate single-source SIGINT products.

These SIGINT products are integrated with information provided by sources from other disciplines by all-source analysts. An EW Co-ordination Centre (EWCC) is co-located with the ASC to ensure that information and intelligence of mutual interest is promptly and efficiently shared. The EWCC can supply combat intelligence concerning:

a. the direction and identification of emitters;

b. the identification of unit, formation, and "combat function" communication networks; and

c. transcripts of intercepted non-secure communications.

32. Coupled with other combat information, SIGINT material is a powerful analysis aid, which can confirm or deny developing hypothesis in the ICAC. Detailed discussion of this topic is found at Chapter 6.

33. **CI Teams**. CI staff are found within the intelligence structures at Corps and Division (G2 CI), and CI sections may exist within some intelligence units. A CI Company is part of the Intelligence Battalion at Corps where it forms the Corps CI Centre (CCIC). Through the investigative efforts and analysis work of CI personnel, and their liaison activity with various agencies, the CCIC and CI staff are capable of providing intelligence concerning adversary intelligence gathering activities and other threats related to espionage, sabotage, subversion, terrorism, and related crime.

34. **TECHINT Company.** TECHINT is gained from the analysis of weapons, associated military equipment, and related technology of opposing force systems in service, under development, or available commercially. Battlefield TECHINT is conducted by TECHINT teams and/or through the establishment of a Captured Material Exploitation Centre (CMEC) at Corps. The TECHINT structure and system is covered in Chapter 7.

35. **Imagery Exploitation Sections**. IE specialists found in an intelligence battalion and in intelligence companies interpret imagery products produced by various sensors available to formations. The IE specialists at Division, Brigade Group and potentially at Battle Group may analyse imagery from formation UAVs and downloaded data from Corps resources. On the other hand, pre-processing of raw imagery may occur and an analysed intelligence product may be disseminated. Regardless of

what is produced, it is disseminated by the formation ASC to the requesting unit and/or the formation G2. Chapter 5 discusses IMINT in detail.

36. **Field HUMINT Teams(FHT).** HUMINT debriefing, interviews, contact handling and interrogation, are normally carried out by teams of specialists from intelligence units at Corps and Division, although HUMINT capabilities can be found in an ASC and at lower levels at lower levels of command to meet mission requirements The degree of emphasis in terms of HUMINT activity is mission-dependent A FHT plans, conducts, co-ordinates and reviews the collection of information from HUMINT sources. As required, it will also direct the activities of defence debriefing teams(DDTs). It ensures that combat information is passed to the ASC and is incorporated as quickly as possible. Chapter 4 covers HUMINT in detail.

37. **Meteorology Sections.** Meteorology (met) support personnel are found at Corps and Division, performing weather data collection, analysis, and forecasting services for combat intelligence staffs. Artillery met detachments also collect ballistic met data in support of artillery firing activities, which is specific to artillery requirements and not included in general meteorological forecasting.

38. **Higher, Flanking, and Lower Intelligence Staffs.** Combat intelligence staffs at higher, lower and flanking HQs provide combat intelligence on activities within their respective areas of responsibility. The flow of intelligence between the various combat intelligence units and staffs is critical to the effective and efficient operation of the combat intelligence system of systems.

39. **Sources and Agencies.** In summary, the most important things to remember with regards to sources and agencies are that connectivity and objectivity on the part of the G2 are critical to success. Intelligence is a system of systems. The 'stovepiping ' of products by various sources and agencies sometimes occurs only because someone believes that their product can only be presented to the Commander in person due to its uniqueness or importance. On other occasions, the G2 may become enamoured with a particular product because of its timeliness or perceived relevance to the mission at hand. At the right time and place, each and every source and agency produces a valuable product. The G2's approach to sources and agencies must be all-encompassing in scope and completely ruthless in terms of evaluating the results. In the end, the sources and agencies are all equal, and it is the G2 and no one else who is responsible for the provision of all-source intelligence to the Commander. In the

Information Age, any commander who receives anything less than the absolute best all-source intelligence is doomed to experience the effects of the adversary's decision cycle, not his own. It is the G2's responsibility to ensure that this does not happen and that available sources and agencies are exploited to the fullest.

# CHAPTER 4
# HUMAN INTELLIGENCE[23]

**WARNING**

The subject of HUMINT invariably relates to PW and other detainees, including civilians. **The Canadian Forces are bound by law to obey the Law of Armed Conflict,** as expressed in the **Geneva Accords**. Under **Canadian law**, CF personnel who are charged with violating the Geneva Accords shall be **tried** under the **Criminal Code of Canada** and convicted as appropriate..

## SECTION 1
## INTRODUCTION

### GENERAL

1. **HUMINT Value**. HUMINT sources and agencies are important sources of information to intelligence staffs. This is particularly true during operations where the relative importance of friendly IMINT, SIGINT and TECHINT capabilities are diminished:

a. by inclement weather, a lack of friendly air superiority or aerial reconnaissance platforms, a significant opposing force air defence threat, and/or forested terrain;

b. during OOTW at the low end of the spectrum of conflict, when exploitable IMINT, SIGINT and TECHINT targets and materials are far fewer than during operations at the mid to higher portions of the spectrum of conflict involving large mechanised forces and air forces; when opposing forces employ effective communications

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[23] **B-GL-357-002/FP-001 HUMINT** is to be published in 2001 and will take precedence over the contents of this chapter.

OPSEC practices or possess few electronic communication resources;

c. on operations whereby political restrictions may exist concerning the deployment of technical/electronic reconnaissance or surveillance capabilities; and

d. operations in urban environments where the use of sensors and communications may be quite limited.

2. **Information Acquisition**. HUMINT sources exist in plentiful supply throughout most deployment areas, regardless of the type of operation. Many of these sources provide information to intelligence staffs indirectly: through media broadcasts, through other intermediaries, or through published statements and declarations.

3. To satisfy many IRs, however, intelligence staffs must meet and directly question HUMINT sources. HUMINT sources, both controlled and uncontrolled, can provide a wealth of timely, accurate, and specific information. The greatest challenge for intelligence staffs with exploitable HUMINT sources is finding sufficient time and trained personnel to debrief or interrogate as appropriate, as follows:

a. friendly military sources such as forward troops, patrols, air crew, convoy drivers, vital point guards, negotiators, observation post sentries, and rear installation guards;

b. friendly and neutral civilian sources such as local political and religious leaders, journalists, suppliers and merchants, refugees, evacuees, business executives and workers, airport officials, and humanitarian aid workers; and

c. adversary force members such as captured soldiers and air crew.

## HUMINT EXPLOITATION TECHNIQUE CATEGORIES

4. During the processing stage of the Intelligence Cycle, information from all HUMINT sources is collated, evaluated in terms of source reliability and information credibility, integrated with other data, assessed and interpreted. The skills associated with these processes are addressed

elsewhere in this publication. This chapter, instead, focuses on the processes associated with:

a. HUMINT debriefings;

b. tactical questioning; and

c. interrogation.

## SECTION 2
## HUMINT DEBRIEFING

### GENERAL

5. HUMINT debriefing involves the questioning of friendly and neutral individuals for the purpose of acquiring information, which may be used to satisfy IRs. Unlike tactical questioning and interrogation, HUMINT debriefing is not aimed at acquiring information from captured members of adversary forces.

6. HUMINT debriefing of friendly force soldiers may be undertaken by Intelligence officers and senior NCOs, or by trained National Counter Intelligence Unit (NCIU) investigators serving with the Counter-Intelligence Section of a deployed intelligence capability. Civilians will normally be debriefed by intelligence personnel trained and qualified in HUMINT debriefing or interrogation techniques(this does not imply interrogation of civilians). This is required due to the degree of sensitivity and skill requirements often associated with these debriefings. It must be noted that debriefing involves the questioning of civilians who have freely agreed to participate. When large numbers of civilians need to be debriefed, intelligence -trained Defence Debriefing Teams(DDTs) may be utilized. DDTs may be comprised of anyone within the CF. DDTs will screen and debrief civilians under the supervision of intelligence personnel.

### CONSIDERATIONS

7. To be effective, HUMINT debriefers must be well prepared to carry out their duties in a professional manner. Careful consideration must be given to the debriefer's personal appearance, arrival details, the use of

aids, debriefing approaches, to their training in the employment of interpreters, and the debriefer's departure.

8. **Technique**. The debriefer must be firm and specific during the questioning of sources. It must be determined in an unbiased manner those sources of genuine value.

9. In areas under hostile influence, HUMINT debriefers must be properly attired and groomed, alert, and confident. When debriefing civilians, who have experienced mistreatment from foreign security or military forces, the wearing of civilian clothing is recommended. Behaviour or comments that could possibly offend the source must be carefully avoided.

10. **Arrival.** It is imperative that the debriefer arrive on time at the scheduled debriefing location with debriefing aids required at hand. Proper introductions should occur, with a handshake offered as appropriate or as the local culture dictates in order to help the source relax and establish the necessary debriefer-source bond. Before questioning begins, the debriefer should determine how much time the source has to spend answering questions, and should endeavour not to overstay the welcome extended. Naturally, the place chosen for a debriefing should be quiet and as free from external influences and interruptions as possible.

11. **Use of Aids**. It is important that the debriefer possess proper background information, appropriate maps, Armoured Fighting Vehicle (AFV)/aircraft recognition manuals, photographs of individuals or locations that may be discussed, and other related aids. Far more certainty can be achieved when pointing to a photograph or map than by using sketches, however the source should first describe the weapon, vehicle, aircraft or location in detail before being shown photographs as a technique to confirm the source's observations of interest.

12. **Debriefer's Appearance**. It is important that the debriefer establish an aura of professionalism and competence to gain the confidence of the source. Failure to do so will not inspire the source to divulge useful information, particularly when sensitive information is being sought from civilians who might be concerned about retribution to themselves, family members, friends, and associates.. Although a genuine interest in the source's recounting of experiences must be displayed, the debriefer must not become overly sympathetic to any plights that the source may have

suffered. Questions must be framed to have the source provide information, rather than "yes" or "no" answers that have only limited value.

13. When seated, it is important that the source's "personal zone area" not be violated and eye contact be maintained. In addition, the source's mannerisms should be critically monitored throughout the debriefing so the debriefer can assess how certain the source is of events being related and if the source is being honest.

14. The debriefer must also structure and control the flow of the discussion, ensuring that as much relevant information as possible is drawn from the source on particular issues before shifting to other topics. This requires a significant degree of training, given that the source may prefer to spend minimum time on topics that arouse emotions of uncertainty or fear, and may ramble quickly from one important topic to another without offering an opportunity for the debriefer to explore areas of critical concern. The source may be given some latitude to shift the focus of the briefing, given that efforts by the debriefer to interrupt the flow of information may be interpreted wrongly by the source as a fundamental lack of interest in what the source considers to be important.

15. The debriefer must refrain from compromising IRs given the possibility that this could influence answers from the source. Knowledge of IRs by the source could also lead to the direct or indirect passage of IRs to adversary audiences and adversary CI agencies. This also includes media members or other third parties who may interview or question HUMINT sources following their debriefing. This could lead to tightened adversary force OPSEC procedures, the compromise of sources, and the endangerment of other persons associated with the source.

16. **Interpreters**. If an interpreter is required during a debriefing, the debriefer advises the interpreter on debriefing objectives and how the debriefer intends to control the debriefing through the interpreter. This occurs prior to the debriefing session.

17. The interpreter is seated to the side of, and slightly behind, the source. This arrangement ensures that the source speaks and looks at the debriefer, and not at the interpreter. Questions and answers are directly exchanged between the debriefer and the source, with the interpreter acting only as an aid to facilitate the discussion. The interpreter is not directed to ask the source particular questions; rather, the questions are put to the

source directly by the debriefer with the interpreter repeating the question in the language understood by the source.

18. Interpreters are selected for their language abilities, trustworthiness and loyalty to the debriefer. They translate questions exactly as delivered by the debriefer, and translate answers exactly as given by the source. For example, during the Gulf War, interpreters often used debriefing/interrogation sessions as their own opportunity to deliver personal messages, with the unfortunate effect of creating a negative impression for the debriefer/ interrogator to overcome. This must be guarded against to as great an extent as possible.

19. **Departure**. Before departing, the debriefer and the source should exchange contact numbers to enable further contact if required. The debriefer should maintain the proper relationship established with the source by concluding the debriefing session with a handshake or as respective cultures dictate. The source is assured that the information provided will be protected and treated as confidential.

## SOURCES

20. HUMINT sources who can be debriefed by intelligence personnel can be grouped under the following broad categories:

a. friendly troops;

b. patrols;

c. peacekeepers; and

d. civilians.

## FRIENDLY TROOPS

21. Friendly troops, regardless of their rank, trade or classification, or employment can gain information of value after deployment to a particular area for even a short period of time. This information may be new, corroborative, or negative, each type of information can be important. Friendly troops comprise an important part of the G2's ICP and every soldier has to be considered as a potential collector. It is the planning, co-

ordination, and processing of information from Friendly troops employed on a wide variety of tasks that presents a challenge to any deployed HUMINT capability(FHT).

22. **Fighting for Information**. Through their intimate contact with adversary forces, forward troops and reconnaissance troops are able to supply much of the information required by combat intelligence staffs. Much of the information gained will be the result of routine reports or sightings. Some information may be fought for in response to information collection requirements. Indeed, much of the tactical-level information in unit areas of influence must be aggressively sought after or fought for given the inherent limitations of strategic- and operational-level intelligence systems and activities to provide intimate knowledge of hostile force intentions, locations and activities at unit level.

23. **Principal Sources**. Soldiers mainly involved in information acquisition activities include:

a. **Reconnaissance Troops**. Reconnaissance troops usually report via radio, however, they could be subject to HUMINT debriefing in special cases. All units have information collecting capabilities. Reconnaissance troops, however, are specially organised and equipped to collect information through. The activities of reconnaissance units and patrols are a co-ordinated part of the overall ISTAR plan. Consequently, both intelligence and operations staff participate in reconnaissance planning. Details on reconnaissance patrolling are presented below;

b. **Forward Troops**. These include infantry, armour, artillery and field engineer troops, usually they report via standard format, however, there are times when HUMINT collection personnel will go forward to debrief them. Units not only employ reconnaissance patrols to discover information, they use troops in front-line trench positions, forward observers, observation posts and surveillance devices; and

c. **Support and Rear Area Troops**. Although reconnaissance and forward troops normally receive the heaviest information collection responsibilities, information collection is also the responsibility of support and rear area troops. In the manoeuvrist battlefield of today, rear areas are not the relatively safe areas they were presumed to be in previous eras. Indeed, modern rear areas are susceptible to hostile artillery, deep manoeuvre operations, special forces, heliborne and airborne force attack or infiltration. Rear area security is a critical concern of all troops on the battlefield, and information collection in rear areas is just as vital as information on forward and flanking areas.

24. **Soldiers Returning from Behind Adversary Lines**. Canadian and allied military personnel who have evaded capture and escaped from adversary territory can provide useful information on terrain, adversary dispositions, living conditions and activities in inaccessible regions. Information of immediate tactical value received by this source would be confirmed by other sources, given that the evader/escaper may have been allowed by hostile forces to return to our lines to inject false information into our intelligence data bases and analysis process.

25. **Requirement to Debrief**. Soldiers have a vested interest in providing information to intelligence staffs, and are generally co-operative in providing whatever information they can. The difficulty for the intelligence staff lies in arranging access to unit personnel, screening them, and debriefing them before the important information they have to share becomes dated or forgotten. Every effort should be made to ensure that troops do not finish operational activities without ascertaining whether they can contribute combat intelligence information of use for future operations. Debriefing should be systematic and a regular feature of any operational activity.

26. **Debriefing Opportunities**. The actual debriefing of friendly troops will depend on rank, the operational mission of the unit, and the level/type of activity involved. Although structured debriefings are the best means of eliciting important information, opportunities to converse with military personnel in informal settings can alert intelligence staffs to information sources or collection issues which can pay dividends. The actual organization and conduct of debriefings is covered in detail later.

## PATROLS

27. Patrols are organised groups of soldiers tasked to gather information (reconnaissance patrols); or to attack, capture or ambush adversary forces (fighting patrols) during all phases of war and operations other than war. Patrols may be as small as three soldiers, or up to Company-size. Patrols may conduct activities along FEBA obstacle belts, may operate deep in adversary-held areas, or may collect information along flanks and throughout rear areas.

28. Patrols tasked to acquire information of tactical value are normally sent forward by Platoons, Companies, Battle Groups or Brigade Groups, with patrolling policies directed by higher headquarters. Division patrols are normally long-range in nature. Restrictions are normally placed on patrolling activities and boundaries, with all patrol activity coordinated by the operations staff to ensure that friendly combat forces and FSCCs are aware of the presence and locations of friendly patrols.

29. **Patrol Planning**. Intelligence units and staff normally develop comprehensive patrol plans covering the formation areas. The number and type of patrols, their missions, time of departure and approximate time of return are coordinated to ensure that patrolling recources are not wasted or engaged by friendly fire when the patrols operate forward of friendly troop positions.

30. Intelligence personnel involved in planning patrol activities take into account the time required by units to prepare for a patrol. Patrol commanders require time to study the adversary and ground, prepare plans, brief and rest their troops, and if possible conduct rehearsals. Patrol commanders are left maximum scope to plan their patrols as they see fit. Whenever possible, units are warned of patrol tasks 48 hours in advance. 24 hours is the minimum warning time for any serious task. Even a simple short-range patrol cannot be prepared with less than 4 daylight-hours notice.

31. Briefly stated, intelligence staffs assist in the briefing and debriefing of fighting patrols and normally take a lead role in the briefing and debriefing of reconnaissance patrols. They participate in patrol planning activity by:

a. providing information on adversary locations, strengths, activities, etc;

b. providing information on terrain including natural obstacles, minefields and barriers, water conditions, etc;

c. providing information on meteorological conditions, such as natural light timings, moon phase and illumination, weather forecast, etc;

d. ensuring that patrol tasks are clear, realistic and worthwhile;

e. briefing and debriefing patrols as appropriate; and

f. ensuring that information gathered by patrols is passed to appropriate staffs for rapid analysis and dissemination. An example of a patrol report format is at Annex A.

32. **Patrol Briefings**. Intelligence staffs participate in the briefing of patrols. The following considerations are worth noting:

a. **Unit**. At the unit, briefings involving Reconnaissance Platoon patrols are often provided by both the unit's IO and the unit's Reconnaissance Platoon Commander. The brigade intelligence staff may participate in the briefing of unit patrols, depending on their nature and mission; and

b. **Brigade Group**. Patrol leaders performing Brigade Group patrol tasks, as assigned in the Brigade Group ISTAR Annex, normally assemble together at Brigade Group HQ or at other pre-arranged locations to be briefed by the G2 and G3 staff. Although most if not all of the necessary information required by the patrols could be provided electronically, it is critically important that the intelligence staff physically meet with the patrols before and after the mission. The intelligence staff must make every effort to assist the patrol leader in the preparation of the mission. Aside from providing patrol leaders the opportunity to satisfy their questions and confirm the details, the initial meeting enables them to resolve transport and communications issues, such as frequencies and special code words, with representatives of the Brigade Group's HQ and Signal Squadron.

33. Prior to departure, the patrol commander needs to have a complete understanding of the undertaking. He needs to clearly understand his mission and the IRs, allowing for OPSEC, that need to be satisfied, along with the time frame in which they are required. He also needs to know about the adversary and friendly forces operating in the area and coordination details. Given this information the patrol commander will be able to effectively plan his mission.

34. **Patrol Debriefings**. A returning patrol is debriefed by a member of the unit intelligence staff immediately upon their return At unit level, the debriefing is done in conjunction with the unit's reconnaissance platoon commander. If returning patrols cannot arrange transport to meet with the Brigade intelligence personnel immediately, the Brigade intelligence personnel shall arrange transport to the parent unit location of the patrol.

35. All members of a patrol normally participate in debriefings, particularly if the patrol sub-divided into smaller patrols once their patrol base was established. Having all members of the patrol attend and contribute to the debriefing process provides a greater likelihood that all relevant information will be brought forward by the patrol. This is particularly true when the returning patrol is experiencing fatigue and may forget details. Naturally, when a returning patrol is of such size that having all members participate in a debriefing is not practical, the patrol leader selects and brings to the debriefing as many members as considered appropriate to cover all aspects of the patrol.

36. **Patrol Report**. Patrol debriefing notes are used to prepare a patrol peport (Annex A). The report can be transmitted electronically, carried to higher headquarters, or sent by facsimile on secure means. The report is normally classified.

37. **CD, CE and PWs**. CD and CE are brought to the debriefing. If a PW was captured during the patrol, PW processing is conducted concurrently by military/regimental police and patrol members not selected to attend the debriefing. If tactical questioning of captured PWs is authorised before PWs are transported rearward, this questioning is conducted following the patrol debriefing by qualified HUMINT personnel, who need to have access to any relevant CD/CE before beginning the questioning.

## CIVILIANS

38. **The Debriefing Problem**. Debriefing civilians is often the most difficult of the various types of HUMINT debriefing to accomplish successfully. Civilians may be experiencing stress; they may be under duress; they may distrust security forces based on previous or recent experiences in their homelands;they may be agents working for hostile elements or they may be willing to share their information with those who do not appreciate the sensitivity of intelligence interests. Moreover, civilians do not have the same obligations that military members have to provide information for the safety of friendly troops or the effectiveness of friendly force operations. As formation intelligence staff/intelligence units may not be able to deploy sufficient HUMINT(FHT or DDT) personnel forward to all concerned areas, troops in contact with civilians may have to conduct debriefings. For these reasons, experienced debriefers of at least senior NCO rank should perform HUMINT debriefing of civilians and should be available within sub-units. The intelligence-trained, senior NCOs need to be fully aware of what is required and close connectivity with intelligence staffs/intelligence unit personnel is strongly encouraged.

39. **Civilians as Sources**. Local civilians, including refugees, who have been within areas controlled by adversary forces, may be valuable sources of information. In recently captured areas, civilians often give information readily. Generally, the longer the delay in questioning civilians, the less valid is the information obtained.

40. Many civilian sources gain information of intelligence interest as a result of casual observation in the course of their daily pursuits. This information is often fragmented and difficult to assess. Skilled debriefing of sources often elicits details of associated facts that the source may not connect with the event itself.

41. **Debriefing Resources**. As indicated earlier, depending upon the type of mission environment, extensive resources may have to dedicated to the debriefing of large groups of civilians. In particular situations, groups of civilians may contain refugees, line-crossers, deserters, and legitimate combatants. HUMINT resources need to be organized to cope with all mission possibilities.

42. **Debriefing Structure**. Debriefings are normally structured, although each debrief need not follow the same format. Topics which are to be considered for inclusion are shown at Annex C.

43. **Debrief Report**. An example of a debriefing report is shown at Annex D.

## SECTION 3
## TACTICAL QUESTIONING

### GENERAL

44. PWs, including adversary deserters, may be the best source of information concerning adversary intentions. PWs can also provide information on adversary unit identifications and locations, combat effectiveness, leadership, and logistic status.

45. Information derived from PWs, however, may not be timely and a single PW can normally only provide limited information. Questioning of considerable numbers of PWs, therefore, is usually necessary to fully develop an understanding of adversary locations, capabilities and intentions. As with all other information, that given by a PW must be confirmed by other sources. The differences between tactical questioning and interrogation include the type of information desired, the methods by which the information is acquired and the emphasis that is placed on the voluntary aspect of tactical questioning. In some cases, PWs will be so relieved to be out of battle, that they will quite readily offer up information of tactical importance.

### CAPTURE AND EVACUATION OF PWS

46. The intelligence value of a PW depends to a great extent on the time lapse between capture and questioning, and the manner in which the PW is handled during this interval. Steps must be taken throughout the capture and evacuation process (Annex E) to ensure that PWs arrive before tactical questioners and interrogators in a condition that can be exploited.

47. Mistreatment of PWs by troops capturing and transporting PWs is contrary to the Law of Armed Conflict and is prohibited. In any case, mistreatment of PWs greatly reduces the effectiveness of subsequent exploitation and may ruin the quantity and value of any information gained . Fraternisation with PWs also enables the PW to relax and removes the shock effect of capture which is normally exploitable by interrogators. It is extremely important that PWs be evacuated as quickly as possible.

## EXPLOITATION OF PW KNOWLEDGE

48. The exploitation of PWs is divided into three distinct stages:

a. **Identification Stage**. The capturing unit normally attempts this by examining the PW's personal documents or assessing the circumstances surrounding capture of the PW. Unless qualified interrogators or tactical questioners are present, no immediate attempt will be made by capturing soldiers to question PWs. If the PW is identified as being of intelligence interest, the screening process at higher levels need not devote time to make this determination. It must be remembered that under international law, there is an obligation to separate PWs from capturing troops and to evacuate them from dangerous places as soon as possible;

b. **Tactical Questioning Stage**. The questioning of PWs by properly trained tactical questioners may occur before the PW is brought before an interrogator. The availability of personnel trained in tactical questioning is important given the limited number of interrogators available, the need for information of immediate tactical value to be available at unit level as quickly as possible, and the inherent time lags in transporting PWs to interrogators or vice versa. **Indeed, only a small number of selected PWs will actually be brought before an interrogator, with most PWs proving to lack sufficient information during the screening and tactical questioning process to merit detailed interrogation**; and

c. **Interrogation Stage**. Detailed interrogation of selected PWs is conducted by interrogation specialists.

## TACTICAL QUESTIONING GUIDELINES

49. Tactical questioners require the appropriate training and experience, and must be working towards a common purpose, as directed by the unit IO or formation intelligence staff or intelligence unit personnel. Tactical questioners:

a. question PWs within two hours of their capture, before disorientation associated with the shock of capture has worn off;

b. conduct questioning within the guidelines established by the Geneva Conventions, national and international laws, and relevant STANAGs;

c. are aware of the IRs to be targeted during the later interrogation of select PWs to prevent compromising interrogator approaches and/or techniques;

d. employ and carefully control trustworthy interpreters to ensure that PWs are not threatened or intimidated, and to ensure that information from PWs is translated exactly as given;

e. ensure that tactical questioning does not delay the rearward transport of PWs for interrogation; and

f. remember that tactical questioning involves the acquisition of information voluntarily given.

## SECTION 4
## INTERROGATION

### GENERAL

50. **Definition**. Interrogation is the systematic and controlled process by which PWs of intelligence interest are brought to part with information of intelligence value by trained intelligence interrogators. As part of the process, interrogators are also trained to exploit captured documents (CDs). **Note:** The subject of interrogation of PWs is currently being reviewed by NATO nations. Procedures should follow the guidelines in NATO AJP 2.5-Handling of Captured Personnel, Equipment and Documents, and relevant Canadian law.

51. **Interrogators**. The interrogation process normally begins once the PW arrives at the formation PW cage. Teams of interrogators from the

Interrogation Section of an intelligence unit, however, may deploy forward to gain immediate access to PWs of primary interest.

52. **Phases.** There are 6 phases associated with the interrogation process: screening, interrogation planning and preparation, approaching the PW, questioning, termination, and reporting.

## THE INTERROGATION PROCESS

53. **Phase 1 – Screening.** During the screening phase, PWs are selected for interrogation based upon their potential to satisfy IRs in a timely manner. PW co-operativeness and knowledge are also measured, with the most co-operative and informed likely to be interrogated first.

54. Intelligence personnel involved in the screening process take into account the IRs to be satisfied, counter-intelligence IRs, information from military police guarding and observing the behaviour of the PWs, and information provided in reports of capture and on PW Capture Tags (Appendix 1 to Annex E). PWs are screened individually in a separate area, with screening reports prepared on each PW processed. A DND 901(6-79) PW Personnel Record (STANAG 2044) NSN 7530-21-880-6753 (Appendix 2 to Annex E) must be used during this process.

55. **Categories of PWs**. The use of interrogation is governed by IRs, time limitations, the availability of other sources, the availability of trained interrogators, the number of PWs moving through the system, and the potential intelligence value of particular PWs. A PW's category is assigned by the first intelligence personnel with adequate training to make this assessment, normally at least a senior NCO.

56. There are four categories of PWs:

a. **Category A**. High level PWs whose broad or specific knowledge of the adversary war effort makes it necessary for them to be interrogated without delay by specialist interrogation staff at the highest level. These PWs include senior leaders of the adversary forces; scientific and technical personnel; PSYOPs, intelligence and political officers; personnel with knowledge of adversary logistics capabilities; and flight crew;

b. **Category B**. PWs who have sufficient information on any subject of intelligence interest to warrant interrogation after screening;

c. **Category C**. PWs who have only information of limited tactical value and do not warrant interrogation; and

d. **Category D**. PWs who are of no interest to intelligence staff.

57. **Phase 2 - Planning and Preparation.** Interrogators assigned to question individual PWs plan approaches to take with the PW based on available information about the PW and IRs. The mental and physical condition of the PW, the PW's background, the objective of the interrogation, and the personality of the interrogator are considered when selecting approaches to take.

58. In preparation for interrogation, the interrogator studies previous interrogation reports, and statements by guards and informants. If possible, the interrogator observes the PW's behaviour prior to the interrogation. The interrogator not only studies what information is required, but assesses which psychological or physical weaknesses can be exploited to learn about the adversary's missions, composition, weapons, strength, equipment, dispositions, tactics, training, combat effectiveness, logistics or other IR that need to be satisfied. Once this has been determined, the interrogator establishes objectives, questions relevant to each objective, approaches, and techniques to use. It should be noted that a tremendous amount of personal, cultural, and demographic information concerning the PW will be available from open sources via the internet and other media.

59. **Phase 3 - Approaching a PW for Interrogation.** Initial contact with the PW is intended to establish rapport with the PW. A professional approach during the interrogation is used, which can become more relaxed if such an approach encourages PW co-operation and openness. The interrogator establishes control over the PW, maintains rapport throughout the interrogation, and provides an emotional environment wherein the PW voluntarily provides truthful information.

60. During an interrogation, PW character traits, mannerisms and other body language indicators are monitored to determine how best to gain information from the PW. Approaches and techniques are combined, but those used must conform to the standards established by the Geneva

Conventions and international law. The Geneva Conventions prohibit interrogators from impersonating medics, chaplains or members of the Red Cross.

61. The best approaches and techniques are those that prompt willing co-operation from the PW. Techniques to encourage and control the flow of communication include the use of silence, hand movements, body positioning, the offer of comfort, the use of deception, the use of partial information, and the use of praise

62. **Phase 4 - Questioning a PW**. Proper questioning techniques are used to acquire as much information as possible, as quickly as possible. Questions are presented in a logical sequence, and may be repeated during the interrogation to check source reliability, factual consistency, and co-operation. Questions which require a narrative answer, and which can be stated briefly, are the best. Non-pertinent questions may be asked to conceal the objectives of the interrogation to preserve OPSEC or to reinforce rapport with the source.

63. Interrogators avoid the use of leading, negative, compound, and vague questions. All information is recorded by the interrogator, or through the use of an electronic recording machine. Interrogators do not allow the recording of information to interfere with the questioning and response rhythm established.

64. **Phase 5 - Terminating the Interrogation.** Interrogations end when the interrogator determines that a break is required to reinforce interrogation approaches, to check for information accuracy, to allow care to be given to wounded or ill sources, to allow control to be re-established at a later time, to provide an opportunity for the interrogator to rest or assess progress, or to permit the prompt evacuation of a PW for interrogation at a higher level.

65. **Phase 6 - Reporting Results.** Information is transmitted as quickly as possible to the intelligence ASC. Initial reports are transmitted electronically, with written reports prepared to follow later. Each report contains the interrogator's assessment of the PW's value, knowledge, reliability and potential for future exploitation.

66. PW interrogation reports are classified CONFIDENTIAL or higher, given the need to prevent the adversary from learning what their captured soldiers have revealed during questioning.

## EXPLOITING CAPTURED DOCUMENTS AND CAPTURED EQUIPMENT

67. **CD and CE**. Often a PW may possess documents or equipment which, when analysed and verified, can result in accurate intelligence. CDs are also taken from battlefield positions and adversary soldiers killed or wounded in action.

68. When CDs are evacuated ahead of PWs for examination by intelligence personnel prior to tactical questioning or interrogation, a suitable notation must be made on the PW Capture Tag.

69. CDs, although treated with caution, are usually deemed to be accurate and truthful. Deceptive documents in the hands of captured PWs are unusual.

70. **Types of Documents**. There are 3 types of documents: official, identity and personal. When captured, these are classified as:

a. **Category A**. Documents of significant intelligence value which may be time-sensitive and which require immediate exploitation;

b. **Category B**. Documents which pertain to cryptographic or communication systems, are classified SECRET, and are forwarded to analysts at higher HQ for immediate exploitation;

c. **Category C**. Documents of general intelligence value which are not time-sensitive and do not require immediate analysis; and

d. **Category D**. Documents which, following translation and extensive analysis, are deemed to be without intelligence value and are disposed of as directed by an appropriate authority.

71. Official documents are confiscated and are not returned to PWs. Identity and personal documents are examined for information of intelligence value, and are returned to PWs in accordance with the Geneva Conventions.

72. **Document Handling**. CD are not marked, altered or defaced during the evacuation process. When CDs are deemed by intelligence personnel to have no intelligence value, they are returned to military police for safeguarding. Otherwise, CDs of military value are evacuated through intelligence means.

73. Details concerning the arrival, description, and disposition of all CDs handled by a G2 staff are entered in a separate CD Log (Annex F). From both a military and legal standpoint, all CDs are accountable materials which must not become personal souvenirs or lost during the evacuation or intelligence analysis process.

74. Responsibilities during the evacuation process are summarised as follows:

a. **Capturing Unit.** CDs found on the battlefield are placed in a waterproof container, tagged and forwarded to the unit intelligence staff. CDs, less PW identity documents, in the possession of each PW are placed in a waterproof bag, tagged and given to the PW senior escort. The following details are recorded on the PW Capture Tag and in each bag of CDs: the date-time when the document was captured, the place and grid co-ordinate of capture, the identity of the capturing unit, the identity of the PW from whom the document was taken, and a summary of the circumstances involved in the capture. The unit IO ensures that all CDs are tagged, performs a quick exploitation of the CDs, reports findings via normal intelligence channels and evacuates CDs of intelligence interest to the HUMINT element or sub-element in the parent formation. Material of no intelligence interest is passed to the military/ regimental police for safeguarding or return to the PW;

b. **Brigade Group.** When CDs arrive, details of the CDs and information contained on the CD Tag are logged in a CD Log by the collator in the Brigade Group ASC. After quickly reviewing CDs for exploitable information and reporting this through normal intelligence channels, CDs are passed to the national command element (NCE) HUMINT element through intelligence means if the CDs contain information of intelligence value for subsequent analysis. Otherwise, the CDs are passed to the military police for safeguarding. Speedy handling of CDs of high value is important, to ensure that interrogators have these in their possession prior to interrogating PWs;

c. **Division.**. When CDs arrive, details of the CDs and information contained on the CD Tags are entered in a CD log by the ASC collator. After quickly reviewing the CDs for exploitable information, the CDs are passed to the intelligence unit/formation HUMINT section for exploitation or to the military police for safeguarding. It is important that interrogators in the intelligence unit/formation section have the opportunity to examine CDs prior to PW interrogation sessions. The intelligence unit/formation section exploits the CDs as fully as personnel availability and time allow, and forward CD Exploitation Reports to the G2 as soon as possible. CDs are evacuated for further exploitation at higher headquarters or given to the military police for custody; and

d. **Higher formation** . When CDs arrive, details of the CDs and information contained on the C D Tag are entered in a CD log by the HUMINT staff. After quickly reviewing the CDs for exploitable information, the CDs are passed to CD exploitation teams on the intelligence staff. CDs are also examined by interrogators at higher levels. CDs are exploited as fully as possible prior to further evacuation for additional analysis. CDs which are of no further exploitable value are given to the military police for custody.

75. **Translation**. Translation can occur at any G2 level, although lengthy CDs will not be held at lower exploitation levels for the sake of translation delays. Translations may be:

a. **Full**. Important CDs, such as technical manuals, may be completely translated at Corps level and above. This requires a large staff of translators;

b. **Extract**. Extracts of a CD may be translated when there is insufficient time or need to translate an entire CD; and

c. **Summary**. A summary of the documents main points may be all that is required for lower level purposes.

76. A translation report format is shown at Annex G.

77. **It should be noted that**:

a. Intelligence elements at Division and below can be quickly overwhelmed by the amount of CDs during a high-intensity conflict, and any attempt to exploit CDs beyond screening and categorising leads to evacuation and proper exploitation delays by intelligence elements better able to exploit the material;

b. CDs are often time perishable, and must be evacuated for exploitation as quickly as possible. There is no set timing for CD evacuation, however the process will be as quick as possible; and

c. where appropriate, duplicate copies of CDs of obvious intelligence value should be made by all G2 staffs to safeguard against the loss of information if the original CDs become misplaced, lost or damaged during the evacuation process. In addition, making duplicate copies of the most important CDs enables analysts to integrate the material with other information at a later date. Storage, photocopy/scanning equipment, and CD quantity factors, however, must be taken into consideration when determining how much CD material can be retained by intelligence organisations in the field.

## POST OPERATIONS REPORTING

78. During operations, Canadian troops acquire a wealth of exploitable information of combat intelligence value. This information is systematically gathered and comprehensively analysed for the benefit of follow-on rotations to any theatre of operation.

## ANNEX A TO CHAPTER 4
## PATROL REPORT FORMAT (STANAG 2003)

1. The main headings of the Patrol Report are:

   a. classification

   b. Date/time

   c. From

   d. To

   e. Info

   f. Message number

   g. Subject: patrol report

   h. Refs: (maps)

   i. Size and composition of patrol:

   j. Task:

   k. Time of departure:

   l. Time of return:

   m. Routes (out and back):

   n. Terrain: (Description: dry or swampy; jungle or thickly wooded; type of brush; rocky or flat; deepness of ravines and draws; condition, type, size and strength of bridges; terrain effect on movement; etc)

   o. Adversary: (Identity, morale, strength, equipment and weapons, location, disposition, organization, movement, condition of defences, time and location of adversary activity, etc)

p. Map corrections;

q. Miscellaneous information:

r. Encounters with adversary: (adversary PWs and dispositions, identification, adversary casualties, CD and CE, etc)

s. Condition of patrol: (Injuries/wounds; disposition of casualties, etc)

t. Conclusion and recommendations: (Mission accomplished? Recommendations for patrol equipment and tactics?)

u. Debriefer rank, name and unit/formation:

v. Date/time of debrief:

w. Internal Distribution

x. (CLASSIFICATION)

## ANNEX B TO CHAPTER 4
## (CLASSIFICATION) DETAILED SCREENING QUESTIONNAIRE

**CLASSIFICATION**

Please Print Clearly

**OPERATION**: **COUNTRY**:

**DEPLOYMENT DURATION**: From ______ to

**LOCATION**

| LOCATION (HQ/Camp Location) | DATES (from/to) | SUB-UNIT & UNIT (in Theatre) | POSITION (UNMO/LO/Coy Clerk/Rifleman) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**NAME**: **INITIALS**:

**RANK**: **MOC**:

**PRESENT UNIT**:

**CONTACT INFORMATION**: Unit Local - _____ Home Phone -

### PLEASE READ THIS IMPORTANT INFORMATION BEFORE YOU BEGIN

1. This questionnaire represents an improvement in debriefing techniques. It has been carefully structured so that it will take you the minimal amount of time to fill out. Please take a few minutes and complete this questionnaire as part of your AAG routine. Turn in the completed questionnaire to the Intelligence staff representative present.

2.

## PHASE 1 DEBRIEF PROCESS

3. The Phase 1 Debrief process identified those personnel who possessed knowledge of areas and aspects of particular concern.

## PHASE 2 DEBRIEF PROCESS

4. Having identified those personnel who may possess detailed knowledge in those areas where the current intelligence database is lacking, the Phase 2 Debrief process seeks to further define the knowledge of respondents. The short questionnaire which follows contains a list of questions specific to a Phase 1 entry. The estimated time to complete a Phase 2 Debrief questionnaire is 10 minutes.

## PHASE 3 DEBRIEF PROCESS

5. Those Phase 2 respondents who can provide information on issues of most concern to intelligence staffs may be selected for a Phase 3 Debrief. Phase 3 Debriefs can be completed in approximately 30 minutes

## OFFENSIVE OPERATION - ATTACK

**MONTH**

| | | | |
|---|---|---|---|
| JAN | FEB | MAR | APR |
| MAY | JUN | JUL | AUG |
| SEP | OCT | NOV | DEC |

**DATE**

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

## METEOROLOGY

| **TEMP:** | **<0 C** | **0 C - 15 C** | **15 C - 30 C** | **> 30 C** |
|---|---|---|---|---|
| **LIGHT:** | **Dark** | **Sunrise** | **Daylight** | **Sunset** |
| **WIND:** | **None** | **Breeze** | **Gusty** | **Gale** |
| **PRECIPITATION:** | **None** | **Fog** | **Rain** | **Snow** |
| **VISIBILITY:** | **<1 km** | **1-5 km** | **5-10 km** | **Unlimited** |
| CLOUD COVER: | None | 30% | 60% | Overcast |
| MOON: | New | First Quarter | Full | Third Quarter |

## TERRAIN

| | | | | | |
|---|---|---|---|---|---|
| SURFACE: | Snow Covered | Icy | Wet | Muddy | Hard-packed |
| VEGETATION: | Grass | Field | Woods | Open | Closed |
| CONTOURS: | Flat | Rolling | Hilly | Steep | Mountainous |
| OBSTACLES | Streams | Rivers | Slopes | Built-Up Areas | Mines |
| CORRIDORS: | Platoon | Company | Battalion | Regiment | Brigade |

## OBJECTIVE OF ATTACK

| | |
|---|---|
| Capture Ground | |
| Capture Vital Point | |
| Capture Equipment | |
| Capture PWs | |
| Destroy Enemy | |
| Divert Enemy | |
| Other | |

## ATTACKING FACTION

| FACTION | STRENGTH | APPROX. NUMBER |
|---|---|---|
| Fill in as reqr | SQUAD SECT | ____________ |
| Fill in as reqr | PL COY | ____________ |
| Fill in as reqr | BN BDE | ____________ |

**DEFENDING FACTION**

| FACTION | STRENGTH | APPROX. NUMBER |
|---|---|---|
| Fill in as reqr | SQUAD SECT<br>PL COY<br>BN BDE | ________<br>________<br>________ |

**ATTACK RATIOS:**

| | | |
|---|---|---|
| <1:2 | 1:1 | >2:1 |

**COMMANDERS INVOLVED:**

| COMMANDER | FACTION | COMMENTS (Aggressiveness, Surprise, Innovation) |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

## ATTACK

(For each question, enter an "X" in the appropriate box.)

| | | INFORMATION | YOUR KNOWLEDGE LEVEL | | | | |
|---|---|---|---|---|---|---|---|
| | | | NONE | LITTLE | SOME | MUCH | THOROUGH |
| M | | **MOUNTING STAGE** | | | | | |
| | 1 | Preliminary warring faction movement into the area of the attack? | | | | | |
| | 2 | Local mobilization? | | | | | |
| | 3 | Recall of local commanders for orders? | | | | | |
| | 4 | Preliminary information gathering by warring factions? | | | | | |
| | 5 | Hospital preparation/blood drive announcements/doctor recalls? | | | | | |
| | 6 | Taking of equipment/heavy weapons from storage areas or positioning of heavy weapons for attack? | | | | | |
| | 7 | Restrictions placed on Friendly Forces freedom of movement? | | | | | |
| | | | | | | | |
| A | | **ASSAULT STAGE** | | | | | |
| | 1 | Presence of supporting tanks or mechanized vehicles? | | | | | |
| | 2 | Presence and use of indirect fire weapons? | | | | | |
| | 3 | Presence of specialist forces, such as field engineers, bridging elements, paratroopers, etc? | | | | | |
| | 4 | Presence of out-of-area forces or foreigners? | | | | | |
| | 5 | Presence of special assault forces? | | | | | |
| | 6 | Follow on attacks by second echelon or reserve forces? | | | | | |
| | 7 | Counter-attacks? | | | | | |

| | | INFORMATION | YOUR KNOWLEDGE LEVEL | | | | |
|---|---|---|---|---|---|---|---|
| | | | NONE | LITTLE | SOME | MUCH | THOROUGH |
| C | | **CONSOLIDATION/WITHDRAWAL STAGE** | | | | | |
| | 1 | Casualty evacuation? | | | | | |
| | 2 | Casualty treatment? | | | | | |
| | 3 | POL, ammunition, water and ration availability following an attack? | | | | | |
| | 4 | Regrouping and arrival of reinforcements? | | | | | |
| | 5 | Consolidation activities before next operation? (eg digging, obstacle construction, mining, etc) | | | | | |
| | 6 | PW handling and evacuation? | | | | | |
| | 7 | Refugee movement after the attack? | | | | | |
| | 8 | Visibility of leaders? | | | | | |
| | | | | | | | |
| 0 | | OTHER INFORMATION | | | | | |
| | 1 | Could you provide any other information, which would be of use to Friendly Forces? Please specify. | | | | | |

**CLASSIFICATION**

# ANNEX C TO CHAPTER 4
# DEBRIEFING CHECKLIST

## ADMINISTRATION DETAILS

Classification:

Name of Debriefer:

Location of Debrief:

Date of Debrief:

Debrief Language and Proficiency:

Additional Information:

## SOURCE'S PERSONAL DETAILS

Name:

Date and Place of Birth:

Nationality:

Religion:

Address:

Telephone Number:

Occupation:

Effective Date of Information:

Attitude to Debrief:

## SOURCE'S BACKGROUND

.

DEBRIEFER'S ASSESSMENT OF SOURCE

TOPICS DISCUSSED AND SYNOPSIS OF INFORMATION

Vital Information:

Political:

Political personalities.

Political parties/groups.

Attitudes towards Friendly Forces.

Additional information.

Military:

Personalities.

Tactics.

ORBATs.

Command and control.

Communications.

Logistics.

Reserves.

Equipment.

Morale/training.

Deployments.

Mines.

Defences.

Targets.

Air support.

Maritime activities.

Additional information.

Economic:

Arms factories.

Sanction busting.

Industries/services.

Civil matters.

Authorities.

Communications.

Additional information.

Topographic:

Key terrain.

Difficult terrain.

Bridges/tunnels.

Additional information.

Humanitarian:

Food and Water.

Fuel.

Shelter.

Intelligence

Medical Aid.

Additional information.

Demographic:

Ethnic structure.

Religious influences.

Sociological influences.

Additional information.

Atrocities:

Personalities.

Detention centres/PW camps.

Additional information.

POTENTIAL SOURCES AND FUTURE CONTACTS

(Include rating of sources)

## ANNEX D TOCHAPTER 4
## EXAMPLE OF A DEBRIEFING REPORT

CONFIDENTIAL
(SECURITY CLASSIFICATION)

**Name of Debriefer:** Capt O. Glyndwr

**Location of Debrief:** Airport Hotel, Lisgar, (WEST) TROUBLELAND

**Date of Debrief:** 24 Jun 00

**Debrief Language and Proficiency:** English (native)

**Additional Information:** Nil

**SOURCE'S PERSONAL DETAILS**

**Name:** Mr Calvin R Smith

**Date and Place of Birth:** 2 Dec 55 New City, (WEST) TROUBLELAND

**Nationality:** TROUBLELANDIAN/CANADIAN (dual citizenship)

**Religion:** (not obtained)

**Address:** (source would not provide)

**Telephone Number:** (source would not provide)

**Occupation:** Office administrator, Computer Intl Corp

**Effective Date of Information:** 15 Jun 00

CR Smith 15 06 00
Page 1 of 4

(SECURITY CLASSIFICATION)
CONFIDENTIAL

CONFIDENTIAL
(SECURITY CLASSIFICATION)

**Attitude to Debrief:** Co-operative. Member feared reprisals and would not provide contact address or phone number.

## SOURCE'S BACKGROUND

Mr Smith was working in (EAST) TROUBLELAND with Computer Intl Corp, (123 Main St, Blacktown), an intl firm operating in TROUBLELAND. The source was accompanied in (EAST) TROUBLELAND by wife and young son. The source had completed 9 months of a 12-month contract in (EAST) TROUBLELAND. The source did not have a military background. The source resided at 56 Lawless St, Blacktown.

## DEBRIEFER'S ASSESSMENT OF SOURCE

The source was cautious about providing information. The source claimed his wife was too distraught to be interviewed. Considered a good source, although details of military information suspect.

## TOPICS DISCUSSED AND SYNOPSIS OF INFORMATION

**Vital Information:** Nil.

**Political**: Most (EAST) TROUBLELANDIANS support government. Most of the source's associates displayed a neutral attitude toward (WEST) TROUBLELAND and THIRDLAND, their government and people prior to the revolution in (EAST) TROUBLELAND.

**Military:** Military traffic, believed by the source to be THIRDLANDIAN military traffic, delayed civilian traffic on major routes before and after the invasion.

CR Smith 15 06 00
Page 2 of 4

(SECURITY CLASSIFICATION)
CONFIDENTIAL

THIRDLANDIAN soldiers accompanied bus-load of foreign nationals (approx 15) from compound where source and his family had been living. Names and nationalities of other personnel on the bus were unknown. Soldiers did not speak much, but urged driver to make best speed to airport. Soldiers also ensured that bus occupants could not see outside bus windows. Soldiers carried sub-machine guns and were dressed in black uniforms. Drawing of shoulder patch worn on left sleeve (red circle with god stars and sword) enclosed. Soldiers also wore a beret with a badge, and black boots.

Military vehicles not observed enroute to airport or at airport (Blacktown Intl Airport 3714).

A THIRDLANDIAN military high performance aircraft and a possible four-propeller transport aircraft observed at Blacktown airport. Comment: Source reports that he believed the high performance aircraft was a new model with air intakes that close. The transport aircraft was described as having a box of some type behind it.

**Economic:** NTR

**Topographic:** NTR

**Humanitarian:** No problems observed pertaining to food, water or electricity in (EAST) TROUBLELAND.

No stockpiling observed prior to revolution in (EAST) TROUBLELAND and arrival of troops from THIRDLAND.

There had been a noticeable increase in blood donor appeals throughout Jun, and his wife had been told that some of the patients at nearby hospital had been released from care two days before the invasion.

CR Smith 15 06 00
Page 3 of 4

CONFIDENTIAL
(SECURITY CLASSIFICATION)

**Demographic:** Some ethnic (WEST) TROUBLELANDIANS living near his compound. Some had departed during May to unknown locations. There had been rumours that some left during the night, and that (EAST) TROUBLELANDIAN secret police may have been involved in their departure. Comment: The source could not confirm this through personal observations.

Numerous ethnic minorities living in Blacktown area. The source knew of four other CANADIAN nationals and a BRITISH national living near his residence. Comment: He could not recall their names, or seeing them on the bus trip to the Blacktown airport.

**Atrocities**: The source heard reports of atrocities on radio committed by (WEST) TROUBLELANDIANS, however he could not provide any specific details. Nor could he recall that the radio reports had included specific details.

Comment: The source believed that the broadcasts were associated with (EAST) TROUBLELANDIAN and THIRDLANDIAN attempts to stir the public to rally against (WEST) TROUBLELANDIANS.

**POTENTIAL SOURCES AND FUTURE CONTACTS**

Nil

(Signature Block of Debriefer)

CR Smith 15 06 00
Page 4 of 4

(SECURITY CLASSIFICATION)
CONFIDENTIAL

# ANNEX E TO CHAPTER 4
# PW EVACUATION PROCESS[24]

## CAPTURE

1. Captured troops shall be disarmed, silenced, searched, segregated and evacuated in accordance with the terms and limitations set out in the Geneva Conventions and applicable STANAGs.

2. Unless PWs pose a serious threat or appear likely to attempt escape, PWs are not bound. PWs are not permitted to speak to others, or allowed to injure themselves or others. Although documents carried by PWs are confiscated for evaluation by intelligence staffs, personal possessions, uniforms, identity papers, first aid kits, helmets and respirators are not taken from them.

3. PWs are at all times treated in accordance with the protections afforded by the Geneva Conventions, and are not left unattended or mistreated.

4. PWs are offered whatever medical aid they require, and may be evacuated rearward under guard through our medical evacuation chain if they are wounded or ill. PWs are neither comforted nor tormented, and care is taken to prevent alerting them to questions that may be posed to them during the Tactical Questioning/Interrogation process.

5. Capturing troops complete as much information on the PW Capture Tag as possible. The Tag can be completed without questioning the PW. PWs are required to provide their name, rank, serial number and date of birth, however PWs are not compelled to provide this information ifthey desire not to.

6. A Capture Report is also prepared at the sub-unit level, which is forwarded with the PW escort party. As a backup measure, a copy of the Capture Report is passed through intelligence channels to the intelligence staff location where the interrogation team is located. The Capture Report

---

[24] NATO and CF PW policies are currently being reviewed.

provides the interrogation team with the initial information required before PWs are questioned.

7. Whenever appropriate, guards are posted around crashed enemy aircraft or other enemy vehicles, installations or buildings which may contain exploitable information of intelligence value.

## EVACUATION AND HOLDING

8. As soon as possible, PWs are collected and transported rearward in accordance with proper procedures. Set procedures are followed at each of the following points along the evacuation chain:

a. **Battalion/Regimental Collecting Point**. At a Battalion/Regimental collecting point, PWs are guarded and protected by designated soldiers under the direct control and supervision of military/regimental police. PWs are segregated according to rank, nationality and sex, and are at all times separated from friendly troops in the area. Deserters, political indoctrination personnel, and civilians are also segregated from other PWs. PWs are treated with correctness; fraternization and harsh treatment of PWs alike serve to frustrate efforts by interrogators to gain exploitable information during the interrogation process. Tactical questioning of PWs by authorized, qualified officers and senior NCOs trained in tactical questioning may occur if such questioning is authorized, does not impede the speedy movement of PWs to waiting interrogators further to the rear, and is likely to result in the acquisition of information of immediate tactical value at unit level. As soon as possible, the capturing unit transports PWs under supervised guard to the formation PW collecting point;

b. **Formation PW Collecting Point**. PWs arriving at the formation PW collecting point are handled and processed in accordance with doctrinal procedures. Tactical questioning or the interrogation of important PWs identified through the tactical questioning screening process may occur at this location. Interrogation in this case is conducted by forward-deployed formation-level interrogators. PWs having a naval or air background are identified for interrogation by qualified air and navy interrogators. As soon as possible, PWs are moved under supervised guard by brigade group resources to the division PW collecting point/cage;

c. **Formation PW Collecting Point/Cage**. Interrogation of important PWs normally begins at this stage. Other PWs are held until such time that transport can be arranged to move them to PW camps. Efforts are made to ensure that all PWs, by this time, have been advised of their rights under Section V of the Geneva Convention;

d. **Higher Formation PW Holding Areas**. A PW holding area is established at higher formation levels such as Corps or task force. All PWs are channelled through this area, where the screening of PWs for further detailed interrogation takes place; and

e. **PW Camp**. This is an established facility either in the communications zone or out-of-theatre for the extended internment and complete administration of PWs. PWs are sent to PW Camps after the completion of interrogation.

9. During the evacuation process, the detaining power or a representative of the detaining power is responsible for the care, custody and control of PWs.

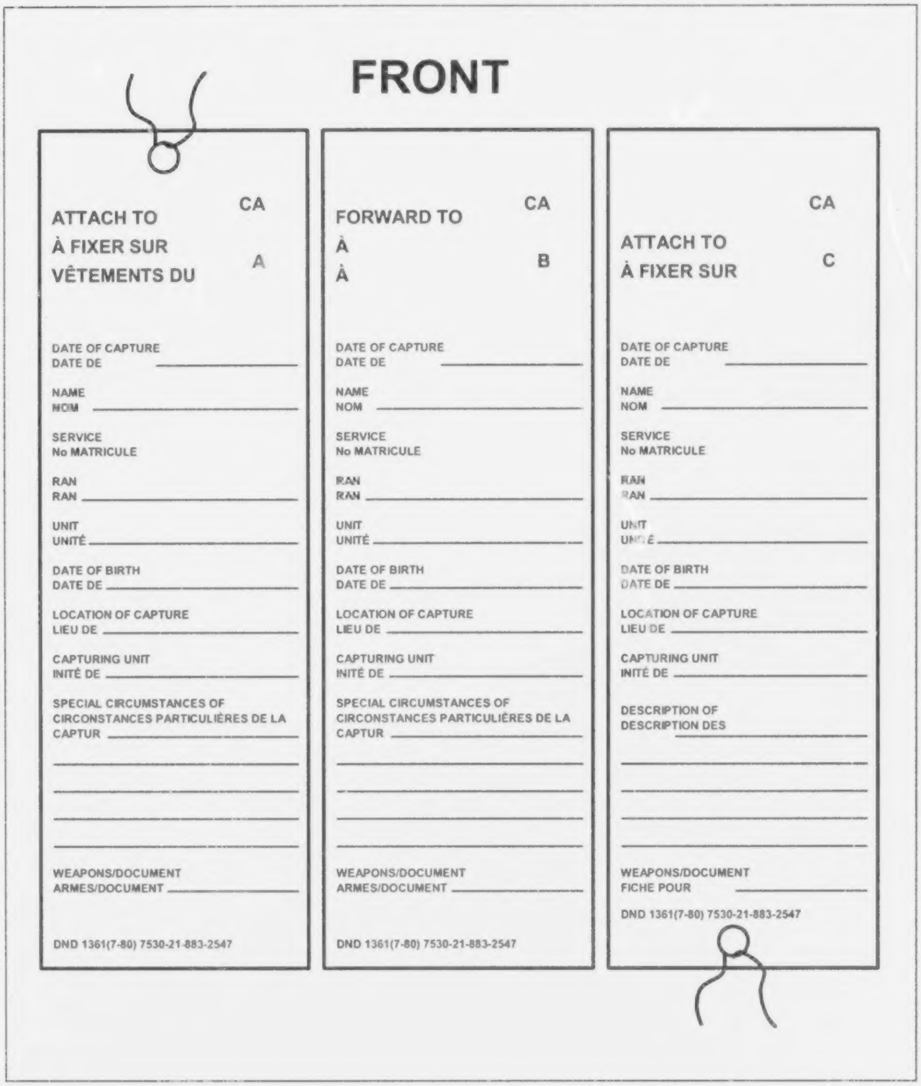
## REFERENCES

10. Additional information is contained at:

a. NATO AJP 2.5 – Handling of Captured Personnel, Equipment and Documents ; and

b. Geneva Conventions.

## APPENDIX 1 TO ANNEX E
## PRISONER OF WAR CAPTURE TAG



FRONT

CA

ATTACH TO
À FIXER SUR
VÊTEMENTS DU

A

DATE OF CAPTURE
DATE DE ____________

NAME
NOM ____________

SERVICE
No MATRICULE

RAN
RAN ____________

UNIT
UNITÉ ____________

DATE OF BIRTH
DATE DE ____________

LOCATION OF CAPTURE
LIEU DE ____________

CAPTURING UNIT
INITÉ DE ____________

SPECIAL CIRCUMSTANCES OF
CIRCONSTANCES PARTICULIÈRES DE LA
CAPTUR ____________

WEAPONS/DOCUMENT
ARMES/DOCUMENT ____________

DND 1361(7-80) 7530-21-883-2547

CA

FORWARD TO
À
À

B

DATE OF CAPTURE
DATE DE ____________

NAME
NOM ____________

SERVICE
No MATRICULE

RAN
RAN ____________

UNIT
UNITÉ ____________

DATE OF BIRTH
DATE DE ____________

LOCATION OF CAPTURE
LIEU DE ____________

CAPTURING UNIT
INITÉ DE ____________

SPECIAL CIRCUMSTANCES OF
CIRCONSTANCES PARTICULIÈRES DE LA
CAPTUR ____________

WEAPONS/DOCUMENT
ARMES/DOCUMENT ____________

DND 1361(7-80) 7530-21-883-2547

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C

DATE OF CAPTURE
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DATE OF BIRTH
DATE DE ____________

LOCATION OF CAPTURE
LIEU DE ____________

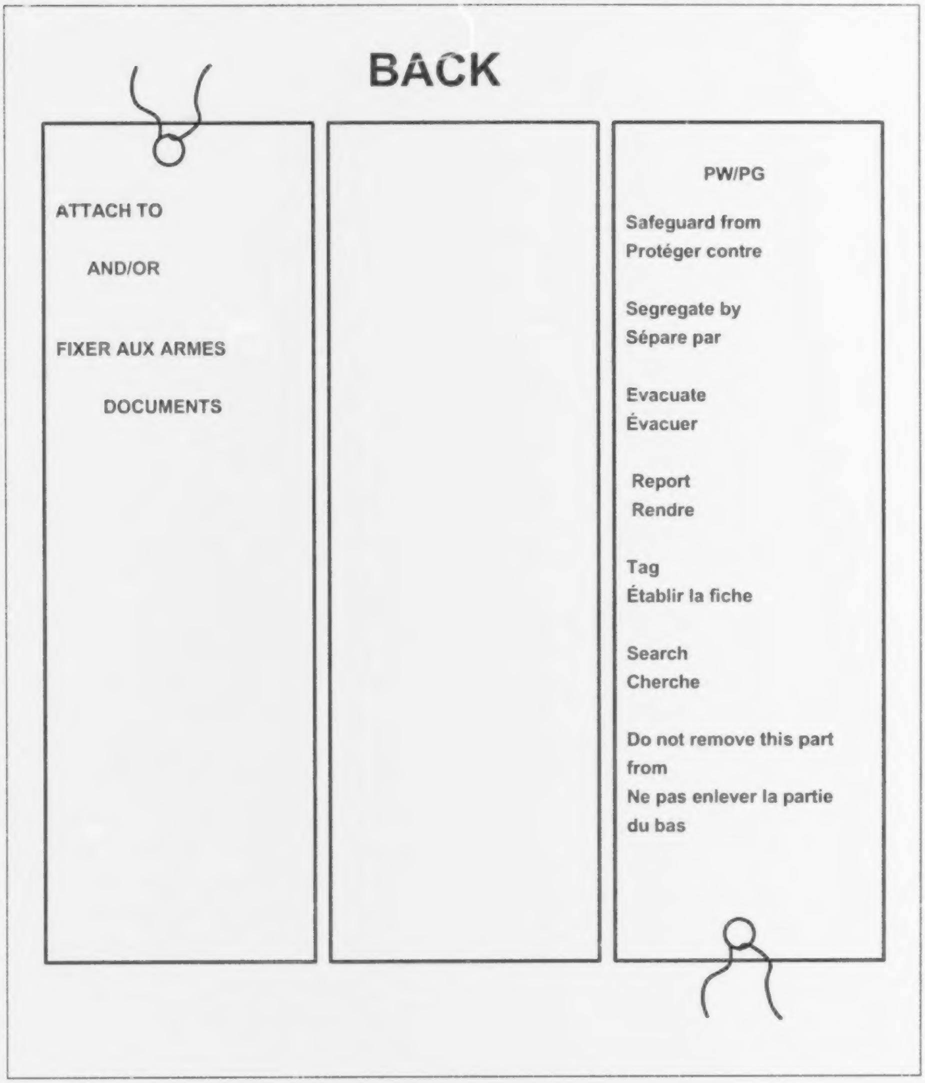
CAPTURING UNIT
INITÉ DE ____________

DESCRIPTION OF
DESCRIPTION DES ____________

WEAPONS/DOCUMENT
FICHE POUR ____________

DND 1361(7-80) 7530-21-883-2547

**Figure 4-2: Prisoner of war tag front**



BACK

ATTACH TO

AND/OR

FIXER AUX ARMES

DOCUMENTS

PW/PG

Safeguard from
Protéger contre

Segregate by
Sépare par

Evacuate
Évacuer

Report
Rendre

Tag
Établir la fiche

Search
Cherche

Do not remove this part from
Ne pas enlever la partie du bas

Figure 4-3: Prisoner of war tag, reverse side

# APPENDIX 2 TO ANNEX E
# PRISONER OF WAR PERSONNEL RECORD

## PREPARATION INSTRUCTIONS

1. In accordance with the Geneva Convention, PWs are required only to provide their name, rank, date of birth and service number. Information which is gathered during the screening and questioning of PWs is entered on the PW's personnel record.

2. The PW personnel record is completed in duplicate. Once copy is retained by the unit holding the PW, with the other copy forwarded as soon as possible to the highest level authority responsible for PW management.

3. The PW personnel record form is typed whenever possible. Where this is not possible, care is taken to ensure that information is written legibly in block letters.

4. The PW personnel record accompanies the PW throughout internment, including any transfer to the custody of allied forces.

5. PWs refusing to give any information beyond what is legally required will have a note to that effect placed in the remarks section of the form. PWs who are unable by reason of wounds, illness or injury to give any information should, as far as possible, be documented in the same way. PWs who refuse to complete an International Committee of the Red Cross (ICRC) Capture Card should have a note to this effect placed on their PW Personnel Record.

6. It is the responsibility of the nation holding the PW to ensure that entries made in the PW personnel record are comprehensible to the PW.

7. Whenever possible, the PW personnel record is to be completed at the PW collecting point.

8. Officers in command of PW collection points and PW camps are to ensure that all appropriate records are properly maintained and available to protecting power authorities for inspection.

## INFORMATION

9. The following information is entered on the PW personnel record form:

a. name, rank, service number, and date of birth;

b. PW's signature certifying that the above information is correct;

c. power served;

d. place and date of capture;

e. place of birth;

f. names of parents;

g. name, address and relationship of person to be informed of capture;

h. address to which mail for PW may be sent;

i. permanent home address;

j. physical condition when captured, including a list of wounds and illnesses;

k. other particulars from the PW's identity card;

l. marital status;

m. religion;

n. nationality;

o. arm or service;

p. unit or vessel;

q. civilian and military occupations;

r. knowledge of languages;

s. description (sex, age, height, weight, distinguishing marks, eyes, skin and hair);

t. impounded property and money;

u. unit and signature of person preparing record, and date prepared;

v. remarks; and

w. photographs and fingerprints.

10. The unit having custody also retains the following information on the PW Personnel Record:

a. name and internment serial number;

b. immunization record;

c. major illnesses and physical defects;

d. blood group;

e. internment employment qualifications;

f. dates and details of serious offences, punishments and escapes;

g. record of transfer details;

h. remarks;

i. financial status at time of first and second international transfer; and

j. repatriation details (reason, mode, date, location, and financial status of PW).

## ANNEX F TO CHAPTER 4
## CAPTURED DOCUMENT LOG FORMAT (STANAG 2084)

**DATE:**____________ **UNIT**: ____________

| CD NUMBER | DTG RECEIVED | FORWARDING HQ | CAPTURING UNIT | DATE/TIIME PLACE OF CAPTURE | DESCRIPTION | DISPOSITION | REMARKS |
|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |

**Figure 4-4: Example format of a captured document log page**

## ANNEX G TO CHAPTER 4
## TRANSLATION REPORT

DATE/TIME

FROM

TO

INFO

MESSAGE NUMBER

SUBJECT: TRANSLATION REPORT

REFS:

a. CONTROL DATA:

b. DOC/CED NUMBER:

c. DOC DESCRIPTION:

d. DOC ORIGINAL LANGUAGE:

e. DATE/TIME RECEIVED FOR TRANSLATION:

f. DATE/TIME OF CAPTURE:

g. PLACE OF CAPTURE:

h. CAPTURING UNIT:

i. CIRCUMSTANCES OF CAPTURE:

j. TRANSLATOR:

k. TRANSLATION TYPE:

l. TRANSLATION OF TEXT:

Intelligence

m. REMARKS:

Internal Distribution

# CHAPTER 5
# IMAGERY INTELLIGENCE

## SECTION 1
## INTRODUCTION

### GENERAL

1. IMINT is intelligence derived from the analysis of any image acquired by photographic, radar, EO, infra-red, thermal and multi-spectral sensors. It is an important element of the all-source intelligence capability at strategic, operational, and tactical levels.

### IMINT VALUE AND LIMITATIONS

2. Through the examination of data presented on film or on an electronic display, objects, units or situational trends can be detected, classified and identified. IMINT reports and other products can then be made available on hard-copy or soft-copy (digital) formats.

3. The principal advantage of imagery over other forms of information is that it is a recording of fleeting situations in a form that can later be assessed under controlled conditions. While a given image will only provide a representation of a situation at a given point in time, a changing situation may be assessed by comparing imagery taken over extended periods or when compared with other information and intelligence.

4. The information derived from imagery can be used to complement map data. Ground features are sometimes difficult to identify and may be obscured in other media. IMINT has the following advantages:

a. It provides a pictorial representation of the ground in far greater detail than any map;

b. IMINTcan be near-real-time and digitally modified or annotated for maximum analytical and presentational values;

c. IMINT easily covers areas inaccessible to ground troops and other sources and agencies; and

d. IMINT can provide day-to-day or situation-to-situation comparisons of selected areas of military interest.

5. Despite the apparent value of IMINT, it is a single source of intelligence. To achieve maximum benefit, it must be integrated with products from other sources and agencies in order to provide the best possible all-source intelligence. When using IMINT sources and materials, it should be remembered that:

a. potential targets may be camouflaged, covered from view, or obscured by decoys as part of a deception plan;

b. imagery sensors and platforms have performance limitations and vulnerabilities;

c. most imagery requires time-consuming ground processing and analysis, although processing time is rapidly being reduced due to developing technology; and

d. imagery collection may be hampered by adverse weather or light conditions, man-made obscurants, modern air defence systems, and electronic counter-measures (ECM).

## SECTION 2
## IMAGERY SENSORS

### GENERAL

6. A wide variety of imagery producing sensors may be mounted on ground, airborne, seaborne and space platforms. These sensors provide:

a. **Real- time Imagery**. Sensors providing real- time imagery are able to relay images of events as they occur;

b. **Near-real Time Imagery**. Sensors providing near-real-time imagery are able to relay images of events with only a slight delay for processing and perhaps first level imagery analysis; and

c. **Time-delayed Imagery**. Some sensors provide imagery after the platform, or a portion of the platform such as a film canister, returns to the ground and the film is processed and analysed.

7. Each type of sensor has unique capabilities and provides different types of information. The choice of sensor systems and platforms depends on a combination of considerations, including the target, the threat to sensor platforms, light and weather conditions, time considerations, the information desired, the type of product desired, and processing capabilities.

## The Electromagnetic Spectrum

8. Some forms of aerial imagery depend on EM radiation. The EM spectrum is divided into regions with different radiation detection, measurement, and production characteristics. Most imaging systems operate in one or more of the following EM spectrum regions: visible light, reflected infra-red, thermal infra-red, and microwave. Each of these regions has characteristics that dictate the resolution, accuracy, range, and performance of the sensors operating in them.

9. The primary determinant of sensor characteristics is wavelength. Radar sees through atmospheric conditions that are opaque to optical or thermal sensors. Thermal sensors have a limited ability to see through light mist or cloud conditions that can scatter the shorter wavelengths of visible light. Sensors that operate in the longer wavelengths produce lower resolution/lower quality images than optical sensors.

10. **Visual Reconnaissance.** Visual reconnaissance information can be relayed quickly and can provide a basis for further reconnaissance activity by multi-sensor platforms. Visual reconnaissance is adversely affected by camouflage, terrain and vegetation, weather conditions, obscurants, inexperience or lack of recognition knowledge by air crew or soldiers viewing targets, and the risk to air crew/soldiers viewing targets. Although visual reconnaissance may be limited in scope and capabilities in some environments, it does provide the advantage of a human surveillance that can provide other types of information and input that sensors may not be able to determine.

11. **Photochemical-Based Imaging Systems.** The newer photochemical-based imaging systems provide timeliness, range, and the ability to operate in comparative darkness or under adverse weather conditions. When compared to other imaging systems, photography affords a familiar view of a scene, system resolutions, that cannot readily be achieved by thermal imagers and radars, and images using various film types for detailed analysis. Photographs can be acquired by cameras fixed to airframes, observers holding cameras in light observation helicopters or light aircraft, and soldiers with hand-held cameras in a variety of situations. The recent development of digital cameras has greatly expanded the capabilities for hand-held and fixed photography, as well as enabling the rapid transfer of the results.

## INFRA-RED IMAGERY SYSTEMS

12. Infra-red systems detect radiating temperature differences from the terrain and objects on the ground. Variations in the level of radiated energy are recorded on infra-red film to produce near optical quality imagery. The same information can be presented in the cockpit for immediate in-flight reporting of near-real time information. There are two types of infra-red systems: IRLS and FLIR.

13. Infra-red systems can operate day or night and can penetrate light atmospheric conditions. However, infra-red systems are least effective ninety minutes after sunrise and sunset when background terrain and targets have the least difference in temperature. Moreover, the quality of the imagery produced may be degraded by dense vegetation and precipitation.

14. Although this passive system is less vulnerable to detection than radar emissions and is resistant to jamming, lower natural energy levels in the thermal region usually require missions to be flown over or near targets at low altitude, thereby increasing the air defence threat against the sensor platform. Consequently, unmanned platforms are particularly suitable for thermal sensor use. Infra-red detecting devices offer significant advantages in low intensity conflicts where platform vulnerability is reduced.

## RADAR

15. Although photographic and infra-red sensors were the mainstay of imagery collection in the past, sophisticated radar systems have been

developed to produce imagery as well. The vulnerability of platforms operating radars is greatly offset by the penetrating capability, resolution, and geometric fidelity of radar over long distances. Because microwaves can penetrate virtually all atmospheric conditions, airborne radars are limited only by the ability of their platforms to operate in adverse weather conditions.

16. Radar operates on two principles: all materials reflect a portion of theEM spectrum, and EM energy travels in straight lines at a constant velocity. Radar pulse energy is reflected from the target and its surroundings back to the reconnaissance aircraft where the pulse returns are recorded chronologically. These recordings provide a representation of the terrain near the aircraft flight path. The geometry and surface composition of targets and their surroundings greatly affect the intensity of radar pulse returns. The resulting variations in pattern and tone, (the radar images), are recorded on film or on a digital database. The quality of radar imagery varies greatly between specific sensor systems.

17. To detect moving targets, radars employ the principle of Doppler shift. Doppler shift is the result of a moving object causing a subtle change in the frequency of reflected pulse energy. The change is detected electronically by comparing the original pulsed energy frequency to the frequency of the reflected energy.

18. When ground terminals are available, imagery can be transmitted to them in near-real time. Radar imagery can also be displayed in aircraft, and continuously monitored by an air crew observer who can report targets using in-flight reports. Processing or correlating radar signals into useable imagery normally takes five to ten minutes. Exploitation of the imagery can take a few minutes or several hours.

19. **Side-Looking Airborne Radar.** SLAR is a target-detection radar capable of performing large-area, long-range stand-off surveillance (Figure 5-1). It has a near all-weather capability and is equally effective day or night. It can be data-linked to ground stations located with supported units for rapid dissemination of information. SLAR missions are flown in a stand-off mode normally with the flight track over friendly areas. The altitude and stand-off distance depends on mission requirements, the air defence threat, weather, nature of the terrain, and capability of the system. There are two types of SLAR systems:

a. **Real Aperture Radar**. Real Aperture Radar were designed for detecting moving target indicators that could be displayed on film or transmitted in near real-time to ground stations located with supported units; and

b. **Synthetic Aperture Radar**. SAR employs an antenna capable of producing a finer resolution that enables the detection, classification and identification of static targets. It was designed to pick up fixed targets. It has proven to be very useful during the IPB process with regards to terrain analysis.

20. Target detection over great distances and under a wide variety of conditions makes radar the sensor of choice in medium- to high-intensity conflicts. Although the tactical application for radar is significant, information from radar imaging systems requires collateral information from other sources. Unlike optical imagery, radar presents an abnormal view of the battlefield and can only be analysed by skilled IE personnel.

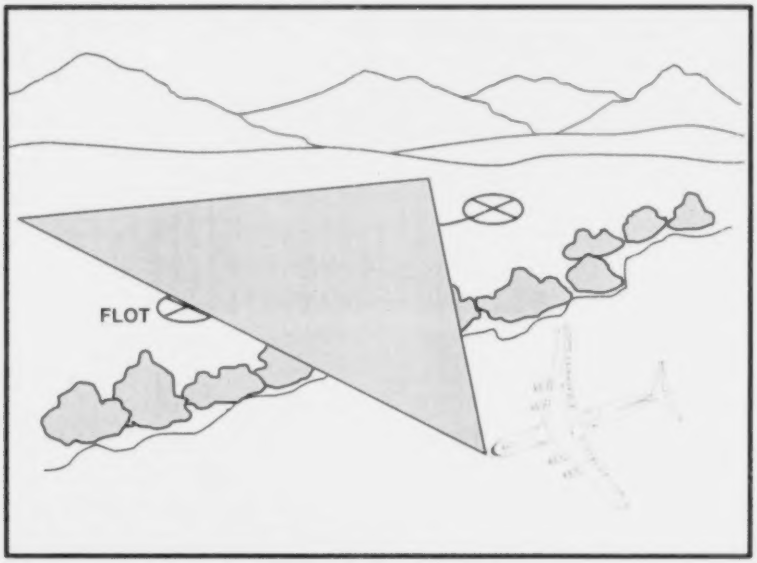


**Figure 5-1: Side-looking airborne Airborne Radar**

## ELECTRO-OPTICAL SENSORS

21. EO sensors provide high-quality imagery. Images can be recorded in a variety of electronic media.

22. **Electro-Optical Digital Imagery Sensors.** EO digital imagery sensors produce visual images that can be used in the same manner as conventional photographs or transparencies. Unlike standard photographic products, they also can be manipulated or enhanced to allow the display of additional information recorded by a sensor. Enhancements range from a simple contrast adjustment to the ability to remove shadows. EO sensors acquire images through camera-like optics, however the image is recorded electronically instead of on a film base, as with traditional optical sensors. This allows immediate transmission from the collecting platform to a ground station for display and analysis as digital imagery.

23. EO sensors employ digital imaging technology similar to a thermal sensor to collect imagery in the visual range. Compared to a photographic sensor, the EO sensor has the following advantages:

a. the dynamic range of the sensor is much greater than that of film. This allows shadow and other detail, which cannot be recorded on conventional photographic emulsions, to be revealed;

b. the sensor can penetrate light atmospheric conditions that are opaque to a sensor using photographic emulsions;

c. imagery derived can be manipulated to reveal the characteristics of an object which are not readily apparent in the original image;

d. imagery derived from EOs can be received on the ground in near-real-time via a data link and exploited in the same manner as radar imagery; and

e. images derived can be compared electronically. This greatly increases the accuracy of the analysis.

24. **Multi-Spectral Scanners.** Multi-spectral scanners record a view in a number of frequencies simultaneously. This allows a wider range of

options when it comes to processing. By using different combinations of scans, it is possible to reconstruct a realistic image or a coloured diagram of the same scene. Each signature is a unique combination of frequencies, depending on its reflective qualities, heat, surface smoothness, and other factors.

## SECTION 3
## IMAGERY PLATFORMS

### GROUND RECONNAISSANCE RESOURCES

25. Most ground based reconnaissance and surveillance platforms(COYOTE) are quite capable of recording digital imagery from electro-optical sensors. Technical capabilities are quite sophisticated. The main challenge lies in interpreting and reporting the results in a timely manner.Aerial Platforms

26. **Satellites.** Satellite-generated IMINT produced for strategic purposes occasionally has tactical value and may be made available from national sources to operationally-deployed formations and/or units.

27. **Manned Aircraft.** Fixed-wing reconnaissance aircraft and helicopters can carry a variety of imagery sensors. Manned aircraft have vulnerability considerations which unmanned aircraft do not have, however manned aircraft on reconnaissance missions usually are more responsive and effective than unmanned aircraft.

### UNMANNED AERIAL VEHICLES

28. **Drones.** Drones are unmanned aircraft that follow a pre-programmed flight path and deliver collected information on their return.

29. The Launcher Section usually deploys some four to seven km behind the FEBA, enabling the drone to fly to extended distances beyond the FEBA. The Recovery Section is usually deployed several kilometres from Corps HQ, where recovered film is interpreted and intelligence produced. An area with sufficient cover to hide drone support vehicles, and an open area of several hundred metres in diameter for drone launch and recovery, are required.

30. **RPVs/UAVs.** Tactical RPVs/UAVs normally operate at altitudes of 1,000 to 3,000 feet above ground level and are controlled in flight from a ground or air control station. Data gathered by RPVs/UAVs can be transmitted in real- time, and an initial intelligence product disseminated in near-real-time, depending on the IA capabilities located in the ground control station or at an ASC.

31. Launch and recovery areas for RPVs/UAVs are normally located three kilometres to fifteen kilometres behind the FEBA. Each Ground Control Station (GCS), providing $C^2$ and first-level imagery analysis, is usually located five kilometres or more behind the FEBA.

32. RPVs/UAVs can provide continuous line surveillance or TA information to the GCS through the use of television, low-light television, infra-red sensors, millimetre wave radar, or a variety of EW packages.

## AERIAL PLATFORM CAPABILITIES

33. Aerial platforms have a number of advantages over their ground-based counterparts, including:

a. **Improved Vantage Point**. Aerial platforms allow the simultaneous imaging of large areas and the capability to cover dead ground;

b. **Stop Action**. Sensors have the capacity to stop action allowing detailed analysis;

c. **Permanent Record**. An imagery database enables analysis of previous coverage to satisfy new requirements;

d. **Comparative Coverage**. Permanent record maintenance allows the progressive comparison of imagery over time, and comparison between imagery derived from different sensors. Comparative coverage enables interpreters to detect otherwise unnoticed objects or activities, verify identifications, and establish approximate dates of activities;

e. **Broadened Spectral Sensitivity**. Sensors are available to record images outside visual range, allowing observation at night, over long distances, and under adverse weather conditions. They also exploit target characteristics, such as thermal emissions, which normally are not visible;

f. **Increased Spatial Resolution and Geometric Fidelity**. These characteristics permit precise identification, measurement and detailed analysis of the objects imaged; and

g. **Timeliness**. The timeliness of IMINT varies according to the sensor. Newer systems can provide real-time imagery for exploitation.

## SECTION 4

## AIR AND AVIATION SYSTEMS

### GENERAL

34. Aerial reconnaissance operations are a primary means of collecting up-to-date information on adversary intentions and capabilities, and of the terrain in an area of operation. Intelligence personnel at various levels exploit the information obtained during these operations.

### TYPES OF AERIAL MISSIONS

35. There are two types of aerial missions associated with information gathering:

a. **Aerial Reconnaissance**. Aerial reconnaissance missions are conducted to obtain information by visual or other detection means. These missions are directed toward one or more specific targets without the requirement to maintain continuous coverage of an area. These missions may be on a one-time basis, or conducted periodically. Their area of coverage is usually smaller than for aerial surveillance missions, however the degree of detail provided of specific targets is normally greater; and

b. **Aerial Surveillance**. Aerial surveillance is the systematic observation of a specified area by visual, electronic, photographic or large-area-coverage sensors (such as radar) or by visual observation from higher altitudes. Surveillance, under optimum conditions, is continuous over the entire battlefield area. It is generally conducted without regard for specific targets although major areas may be emphasised.

36. **Strategic Reconnaissance Operations.** Strategic reconnaissance operations normally cover areas or targets beyond the area of interest of the land force commander. They are requested by Joint Force HQ or Theatre HQ, and not by forward land formations.

## TACTICAL AIR RECONNAISSANCE

37. Tactical air reconnaissance (TAR) operations are defined as the acquisition of intelligence information in support of ground forces. TAR provides timely and accurately tactical information on the location, composition, activities and movements of adversary forces, for air and ground forces employment as well as for BDA. This information is collected by aerial vehicles using visual observation and/or optical, infra-red, radar and signals intelligence sensors. TAR flies day and night, and in adverse weather, within the limits of each specific collection system against pin-point and area targets, lines of communication, or search targets.

38. TAR missions, are either pre-planned or immediate:

a. **Pre-planned Missions.** These missions are tasked in advance of operations. They specify the target and time on target (TOT), and allow for time to perform extensive mission preparation. Reconnaissance missions in support of air interdiction and offensive counter-air operations normally are pre-planned missions;

b. In a NATO context, Reconnaissance Programme (RECPROM) missions are pre-planned for concentrated border surveillance in peacetime and times of tension;

c. **Immediate Support Missions.** These missions are tasked to meet specific intelligence information needs which arise during operations. Planning is conducted as quickly as possible to provide the fastest possible response to information requests. Most reconnaissance missions in support of offensive air support activity and ground operations fall into this category.

39. **Types of TAR Missions**. TAR missions may be:

a. **Visual Reconnaissance**. The TAR aircrew flies to the target area and on return the pilot reports what was seen. This type of mission does not require a sophisticated sensor package or a large processing facility. Approximately forty percent of the total picture can be expected to be gathered from a visual reconnaissance report; and

b. **IMINT.** This is the collection of information using sensors that produce images of the target. Each type of sensor possesses distinct capabilities and limitations, which influence their employment. Missions include:

(1) Photo reconnaissance missions, with optical cameras mounted on the aircraft to provide panoramic (horizon-to-horizon abeam the aircraft),oblique (to either side or in front of the aircraft) and/or vertical (directly below the aircraft), photographs. These views are shown at Figures 5-2, 5-3, and 5-4;

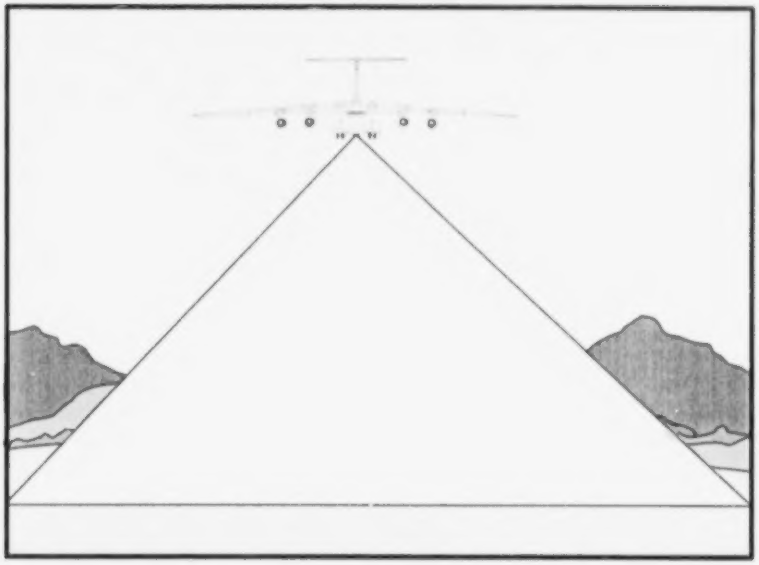


Figure 5-2: Panoramic photography

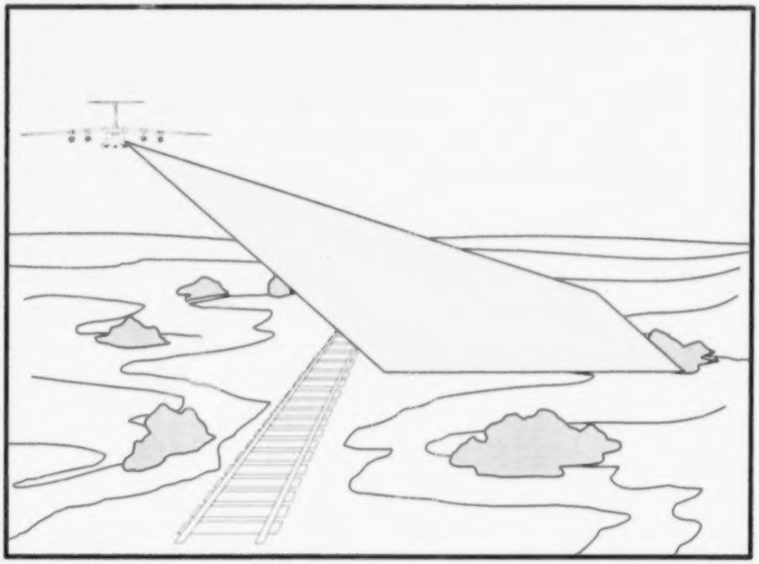


Figure 5-3: Oblique photography

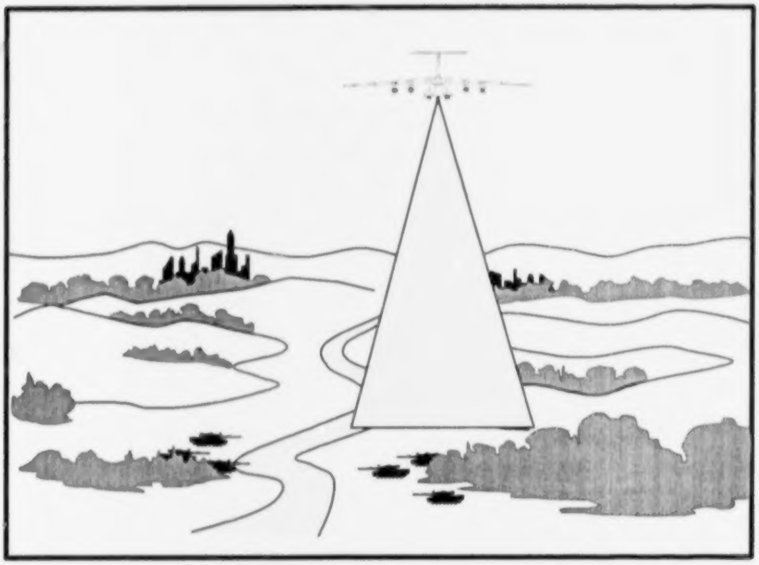


Figure 5-4: Vertical photography

(2) infra-red sensor missions; and

(3) radar imagery missions.

40. **Reconnaissance Target Categories.** The following terms describe target categories:

a. **Pin Point**. A pin-point target is a small area usually not bigger than one kilometre by one kilometre, and normally defined by a single co-ordinate location. Command posts, bridges, airfields, and surface-to-air missile sites are considered to be pin-point targets. Sensor coverage includes a reasonable area surrounding the target location to allow for target definition and plotting error. Oblique photographs may be taken as the aircraft passes the target. If a pass over the target is required, the aircraft executes a low-level high-speed pass over the target;

b. **Line Search**. Line search reconnaissance is conducted along a specific line of communication, such as a road, railway or waterway, up to 45 kilometres (thirty nautical miles) long to detect fleeting targets and activities in general. Sensor coverage is required for start and end points, and significant sightings enroute. Continuous IR coverage is desirable. When two aircraft participate in a line search, the aircraft fly in a loose-echelon formation at low altitude with an aircraft on each side of the route to permit visual observation and oblique photography under foliage;

c. **Strip Search**. Strip search reconnaissance is conducted along a straight line between two given reference points up to twenty kilometres (ten nautical miles) apart. Sensor coverage is required for start and end points and significant sightings enroute. Continuous IR coverage is desirable. Strip search reconnaissance is similar to line search reconnaissance except that the aircraft flies from one point to another in a straight line. Vertical and oblique cameras can be used, as well as visual reconnaissance;

d. **Area Search**. Area search reconnaissance is conducted to locate known or suspected activity within a defined area. Visual reconnaissance is the primary means with continuous IR coverage being desirable;

e. **Area Cover**. Area cover reconnaissance is the systematic and complete coverage of an area not larger than 20 kms (10 nautical miles) using visual and/or imaging means to detect known or suspected activity. The aircraft flies back and forth across the pre-determined area in such a way that the flight lines overlap. The flight lines are planned and the exposure is adjusted according to aircraft speed so that each successive frame of imagery overlaps the previous one;

f. **SLAR Segment/Box**. A rectangle, approximately fifteen kilometres (eight nautical miles) wide and twenty to ninety kilometres (ten to fifty nautical miles) long, containing a group of smaller target points. One segment equates to one target. Total SLAR coverage is required; and

g. **Area of Immediate Interpretation**. An area of immediate interpretation is a small target point within a SLAR segment, which has been assessed as a likely location for adversary activity. SLAR coverage usually includes a 20 kilometre (ten nautical miles) radius around the point for full exploitation.

## AIR RECONNAISSANCE SYSTEM

41. **Theatre Level**. Each tactical air force or composite air force normally has a reconnaissance element consisting of tactical reconnaissance and fighter-reconnaissance aircraft. At Theatre level, where a Joint Intelligence Committee may be established:

a. a Joint Air Reconnaissance Intelligence Board (JARIB) co-ordinates and allots priorities for air reconnaissance requirements of the three services; and

b. a Joint Air Reconnaissance Intelligence Centre (JARIC) provides intelligence information from the results of air reconnaissance. The JARIC has facilities for imagery interpretation.

42. **Joint Force HQ Level**. Apportionment of the air effort at Joint Force HQ level is performed at the daily Joint Command Operations Centre (JCOC) meeting. The air force tasking agency of the JCOC is the Air Command Operations Centre (ACOC). The Joint Reconnaissance Centre (JRC), a subordinate tasking agency of the ACOC, co-ordinates requirements for air reconnaissance and provides advice for the tasking of air reconnaissance sorties. The JRC is a small intelligence-operations cell associated with another subordinate tasking agency of the ACOC - the Air Support Operations Centre (ASOC).

43. Immediate requests for reconnaissance/imagery support are submitted directly to the organisation's supporting TACP. If approved by G3 in consultation with G2, the TACP sends the request directly to the ASOC at Corps for immediate action. Immediate requests are accomplished by alert aircraft or by consolidation with a pre-planned mission.

## AVIATION RECONNAISSANCE SYSTEM

44. **Corps**. See the Electronic Battle Box for 10 Allied Corps resources.

45. **Division.** A Division has an aviation wing under OPCOM. An aviation wing can assign an observation squadron under OPCOM to each of the three Brigades within the Division, and retains an observation squadron to perform reconnaissance missions in support of the division reconnaissance regiment for the division commander.

46. **Brigade Group.** Each Brigade Group has an observation squadron under OPCOM. Surveillance missions are flown in support of the Brigade Group Reconnaissance Squadron.

## REQUESTING IMAGERY AND RECONNAISSANCE SUPPORT

47. If imagery is desired, the following steps are generally followed:

a. the unit operations or intelligence staff identifies a requirement for imagery of a particular location or target;

b. the unit IO vets the request to determine if the desired information is already in the intelligence database;

c. if the desired information is not available, the unit IO sends a request for imagery to the Brigade Group G2 staff;

d. the Brigade Group G2 staff consult with the air and aviation staff personnel in the Brigade Group TACP for reconnaissance mission feasibility, and seek G3 approval for acquiring the imagery support and/or associated reconnaissance mission; and

e. if imagery can be obtained using Brigade Group aviation or land element resources, G3 tasks the appropriate aviation or land unit to provide support. If the request for imagery can be met by Division air or aviation resources, or must be filled by Corps or national resourcs, Brigade

Group G2 normally forwards the request for imagery to the Division G2.

48. Requests for other aerial reconnaissance support are normally channelled as shown at Figure 5-5.

| STEP | AIR RECONNAISSANCE SUPPORT | AVIATION RECONNAISSANCE SUPPORT |
|---|---|---|
| 1 | The unit operations staff identifies an air reconnaissance requirement. | The unit operations staff identifies an air reconnaissance requirement. |
| 2 | The unit IO vets the request to determine if information is already in the database. | The unit IO vets the request to determine if information is already in the database. |
| 3 | If the unit IO does not have the desired information, the task is forwarded by the operations staff to brigade group HQ using the appropriate air request message format. | If the unit IO does not have the desired information, the task is forwarded by the operations staff to brigade group HQ using the appropriate helicopter request (HELQUEST) format. |
| 4 | The request is vetted by the brigade group TACP, artillery and G2 staffs. If the mission requirement is supported, it is passed to G3 for approval. | The request is vetted by the brigade group aviation, artillery and G2 staffs. If the mission requirement is supported, it is passed to G3 for approval. |
| 5 | If the mission is approved by G3, the Air Request message is passed to the ASOC on the air request net. | If the mission can be conducted by the brigade group aviation squadron, the squadron is tasked by G3. If the mission requires higher resources, the HELQUEST is forwarded to division HQ on the aviation command net. |
| 6 | Division HQ staff monitor the request, signify support for the request, and assign a priority number to the request. | The request is vetted by the division aviation and G2 staffs. If the mission requirement is supported, it is passed to G3 for approval. |
| 7 | If the ASOC staff accept the request, an air request/task message is sent to the brigade group and the ASOC tasks its allotted air resources. | If the mission can be conducted at division, the task is passed to the supporting tactical aviation wing HQ for action. |

| STEP | AIR RECONNAISSANCE SUPPORT | AVIATION RECONNAISSANCE SUPPORT |
|---|---|---|
| 8 | At Wing HQ, the mission is briefed and the Ground Liaison Officer (GLO) passes a TOT message to the ASOC which relays this information to the originating brigade group. | Aviation wing HQ confirms mission feasibility and resource availability. |
| 9 | The mission is launched; the pilot may provide an in-flight report to the TACP during the mission. | Aviation wing HQ forwards an acceptance/acknowledgement, advising the originating unit and brigade group of mission details. (If higher level resources are required, the task is forwarded through Aviation channels to higher HQ for action.) |
| 10 | The wing GLO and the air intelligence staff debrief the mission crew and a mission report (MISREP) is sent to the ASOC. | The mission is flown. |
| 11 | The ASOC relays the information to the requesting Unit via division and brigade group HQ. | Requested information is passed to the originating unit via division and brigade group HQ. |

**Figure 5-5: Requesting Reconnaissance Support**

49. Before requesting aerial photography, the following factors must be considered:

a. **Available Platforms**. Not all aircraft are capable of mounting cameras, and in many cases aircraft which can mount cameras can only operate one camera during a mission. This factor limits the type of aerial photograph to either vertical or oblique photographs;

b. **Targets.** Adversary targets, which are likely to move before their presence can be reacted to by friendly fire or neutralisation systems generally, are not suitable targets for imagery missions. Information provided through in-flight reports is normally sufficient for such targets;

c. **Tactical Situation**. The air defence threat and the location of the FEBA affect the selection of flight routes, camera pods, and photograph angles. To protect the reconnaissance platform, targets are preferred which do not necessitate the aircraft having to over-fly the FEBA or make multiple passes in areas where a probable air threat exists;

d. **Terrain, Light and Weather Conditions**. These elements affect reconnaissance aircraft flight path options. High oblique photographs of targets to the west of a reconnaissance aircraft cannot be taken at sunset without risking overexposure; similarly, high oblique photographs of targets to the east of a reconnaissance aircraft cannot be taken at sunrise;

e. **Photograph Quantity**. If a reconnaissance aircraft conducts a linear reconnaissance run at a speed of 450 knots, using a camera that exposes four frames per second, approximately twelve overlapping photographs will be produced for each kilometre the aircraft over-flies while the camera is turned on. The lengths of time it takes IAs to interpret photographs and produce annotated imagery is directly proportional to the number of photographs that must be exploited. Hence, there is a requirement to be selective when choosing camera on/off points, targets of interest, and the number of annotated photograph copies desired; and

f. **Depth Perception**. Although oblique photographs provide good depth perception, the width of target areas will be limited to approximately 500 metres.

## RECONNAISSANCE REPORTING

50. Several reporting formats are designed to provide intelligence information essential to the ground commander in a clear, concise form. The most significant reports are:

a. **In-Flight Reports.** In-flight reports (INFLTREPs) are used to report tactical information of such importance and urgency that any delay in reporting would negate the value of the information. These reports are transmitted by voice broadcast over a designated net. Receivers of INFLTREPs are normally specified in Air Task Messages. Every TAR mission normally provides an INFLTREP; and

b. **Reconnaissance Exploitation Reports Radar Exploitation Reports .** A standard post-flight report is required for every visual/photograph/infra-red or SLAR mission. Reconnaissance exploitation reports (RECCEXREPs) are used to report the results obtained from the first rapid analysis of imagery and aircrew debriefing. Radar exploitation reports (RADAREXREPs) are used to disseminate results obtained from rapid analysis of radar imagery and aircrew debriefing. A RADAREXREP format is shown at Figure 5-6.

| ITEM | FORMAT | EXAMPLE MESSAGE |
|---|---|---|
| 1 | RADAREXREP | RADAREXREP |
| 2 | AIR TASK/MISSION NUMBER/ ORIGINATOR'S REQUEST SERIAL NUMBER | 2/F/123 |
| 3 | A. LOCATION IDENTIFIER | A. LC 700210 |
| 4 | B. TIME ON TARGET/TIME OF SIGHTING | B. 231700Z |
| 5 | C. RESULTS | C. 18 MEDIUM RETURNS IN LINEAR PATTERN. 15 SPACING/PROBABLE ARMOUR |
| 6 | FURTHER REPORT MAY FOLLOW: YES/NO | YES |
| 7 | D1. OTHER INFORMATION | D1. CONCENTRATED SAM FROM AREA 2 KM SOUTH OF TARGET |
| 8 | D2. WEATHER | D2. CLEAR |
| 9 | E. SENSOR TYPE AND EXPOSURE NUMBER | E. SLAR L 0001 TO 0003 |
| 10 | F. QUALITY AND SCALE OF IMAGERY | F. 3 1:100,000 |
| 11 | G. PERCENTAGE OF COVER | G. 100 |

**Figure 5-6: RADAREXREP Format**

## SECTION 5
## FILMS, PHOTOGRAPHS AND MOSAICS

### FILM

51. **Panchromatic Film.** High resolution, simple processing methods, and low cost, have contributed to the extensive use of black and white photography. At the altitude at which Army aviation normally operates, ground films are ideal. Aerial film characteristics offer significant advantages at higher altitudes and over long ground distances.

Panchromatic film records the amount of light reflected from objects in tones of grey, running from white to black.

52. **Infra-Red Film.** Infra-red film is black and white film which is sensitive to infra-red waves. This film can be used to detect artificial camouflage materials and can be used to take photographs at night is there is a source of infra-red radiation.

53. **Camouflage Detection Film.** This film records natural vegetation in a reddish colour, and artificial camouflage materials as a bluish colour.

54. **Colour Film.** The lower resolution and higher cost of colour film offset the advantage of having colour photographs, however the water penetrating capability of colour film is useful for beach and river-crossing reconnaissance. Colour positive transparency film is considered preferable to negative film for imagery analysis because higher system resolution and colour fidelity can be achieved without the requirement to produce prints. Colour film is limited in its use because of the time required to process it, and its need for bright, clear, sunny weather.

## STEREOVISION

55. One of the limitations of the vertical aerial photograph is the lack of apparent relief. Stereoscopic vision, or stereovision, provides the ability to see three-dimensionally. The ability to see length, width and depth (distance) at the same time requires two views of a single object from two slightly different positions.

56. When overlapping photographs are viewed with the aid of special optical instruments (stereoscopes), height and slope determination is enabled. Stereo viewing also reveals detail not visible to the naked eye.

## AERIAL PHOTOGRAPH CATEGORIES

57. Aerial photography is categorised according to the position and orientation of the camera. Aerial photographs are usually classified as:

a. **Vertical**. Vertical coverage of a relatively small target area is obtained by direct overhead photography. Although vertical images provide an unfamiliar view of the ground, and relief is not readily apparent, vertical photography provides imagery of a relatively constant scale enabling IAs to achieve optimum results from stereovision and measurement work. Vertical photographs can be used singly, in stereo pairs, and in uncontrolled mosaics;

b. **Oblique**. Aerial photographs taken at an angle from the vertical obtain oblique coverage of a target or area. High oblique photographs include the apparent horizon and cover a large tract of ground; low oblique photographs do not include the horizon and cover a smaller area of ground. Oblique photographs are taken when the aircraft is flying toward, or is parallel, to the target. These photographs closely resemble a normal eye view and allow IAs to see into an area in a normal fashion. Oblique photography with overlap enables limited stereo viewing. Mensuration (measurement work) is more difficult than with vertical photography since the scale is not constant over the frame and precise subject distances cannot be determined. Relief is discernible but distorted; and

c. **Panoramic**. Panoramic photographs are taken with a special camera or lens which scans a wide area. Low panoramic photography is taken at low altitudes and scans a wide angle, including the horizon on either side of the aircraft flight line. High panoramic photography is taken at higher altitudes with a smaller scan angle, and the horizon is not normally visible on the image. In only one pass over the target area, panoramic photography provides coverage of large areas of terrain on both sides of the aircraft flight path. It also provides both a vertical and oblique view of the target area. It is, however, the most difficult and time-consuming photography to analyse and measure, owing to the distortion of the recorded image.

58. Aerial photographs may also be categorised as trimetrogon, multiple lens, and convergent. Each of these minor categories involves the use of multiple photographs, lenses or cameras to produce composite photographs.

## IMAGERY PRODUCTS

59. In addition to the standard INFLTREPs, RECCEXREPs and RADAREXREPs, other products are available which can further enlighten commanders and intelligence staffs. The most common of these are photographic prints, mosaics, photomaps and pictomaps. Uses for these products include evaluating concealment practices and camouflage techniques, supporting briefings, and supporting operational planning.

60. When requesting photographs, areas will be kept as small as possible and confined to specific points in order to assist IAs and remain within the capability of processing and interpreting facilities. Targets suitable for imagery product requests include landing zones, drop zones, objective areas, critical points along routes, and target areas.

61. **Prints**. A photographic print represents a single frame of imagery. Prints can be used to supplement written reports, and serve as excellent aids when preparing for operations.

62. When requested, a print is annotated to show items of military significance, reference grid co-ordinates, a "north arrow" for orienting the print to a map, titling data, and additional information pertinent to the mission. Additional information on annotation is found at Section 7.

63. **Mosaics**. The aerial photographic mosaic is a combination of two or more overlapping prints which form a single picture. Mosaics can be of significant value in providing an up-dated picture of a large area to supplement map data. Usually, vertical photographs are used and produce map-like results. However, oblique photos can be used to produce a panorama.

64. Mosaics supplement map information by displaying current information on roads, trails, built-up areas, and terrain or vegetation conditions. Where maps are not available, mosaics may serve as maps. In such cases, mosaics will normally have a grid system for locating points and marginal data.

65. There are three general types of mosaics:

a. **Uncontrolled Mosaic**. This is an assembly of two or more overlapping vertical photographs assembled only by matching photographic detail without the aid of ground control. Such mosaics provide a good pictorial effect of the ground, but may include distortions caused by scale or azimuth differences. A strip mosaic is formed by a series of vertical photographs taken in a single flight;

b. **Semi-controlled Mosaic**. This mosaic is laid to limited ground control, augmented by radial line or slotted template positions; and

c. **Controlled Mosaic**. A controlled mosaic is laid to ground control, and augmented by radial line or slotted template positions. Photographs are corrected to achieve a common scale, however errors in image position caused by relief of terrain are not removed.

66. Orthophotomosaics are an assembly of orthophotographs forming a uniform-scale mosaic. An orthophotograph is a photographic copy in which displacements of images because of tilt and relief have been removed.

67. **Photomaps**. A photomap is a reproduction of a photograph or mosaic upon which grid lines, marginal data, place names and other overprint information have been added. Normally, a military photomap is a map-size reproduction of a controlled mosaic. As a map substitute, it is reproduced in quantity and printed on a press using standard map paper. A photomap made from an uncontrolled mosaic provides a good picture of the terrain and can be prepared quickly, although some errors in scale and direction will exist. A photomap made from a controlled mosaic take much longer to prepare but can be scaled approximately. On some photomaps, man-made features may be added in red, with drainage features added in blue.

68. **Pictomaps**. A pictomap is a refinement of the photomap on which the tones and imagery of a photomosaic are converted into symbols and the following colours:

a. land-tone (buff) for uncovered land;

b. vege-tone (green) for vegetation; and

c. shadow-tone (black-green) for darker shades and shadows.

69. Many roads and buildings may appear in white, buff, or red, depending on the size and importance of the building and the scale of the pictomap. Main roads, some buildings, certain linear features, and control information are overprinted in red. Names, grids, boundaries, marginal data, railroads, contour lines, and hydrographic data are overprinted in black. Drainage symbols are overprinted in blue.

70. **Imagery Title Data.** Each aerial photograph contains in its margin valuable information for the photograph user. The arrangement, type, and amount of information is standardised, although technological advances periodically lead to changes in the type of data presented.

71. The following information is generally listed:

a. frame number;

b. sensor configuration;

c. photographing unit and service;

d. sortie/mission number;

e. date-time group for TOT or mean sortie time;

f. focal length, altitude;

g. project name/number, exercise name;

h. geographic/universal transverse mercator (UTM) co-ordinates or target number;

i. sensor description code; and

j. security classification.

72. **Hand-held Film**. A hand-held camera is defined as any framing camera in which the direction and operation is manually controlled. An imagery record log is maintained on all rolls of imagery and packets of cut film sheets. The log includes the following information for each frame of usable imagery: originating agency, intelligence report number and date of report, country code, type of platform (such as ground or airborne), frame number, place name and geographic co-ordinates, camera bearing (compass

degrees), date-time group, security classification, aircraft altitude above ground level if applicable, camera type and serial number, focal length, shutter speed, and f-stop.

## SCALE DETERMINATION

73. Before an aerial photograph can be used as a map supplement or substitute, it is necessary to know the scale of the photograph. On a map, the scale is printed as a representative fraction which expresses the ratio of map distance to ground distance (e.g. 1:50,000). On a photograph, the scale is the ratio of the photo distance to ground distance (e.g. 1:18,300). This is achieved using one of two methods:

a. **Comparison Method**. The scale of a vertical aerial photograph is determined by a comparison of a measured distance between two points on the photograph with the measured ground distance between the same two points (i.e. Scale = Photo Distance/Ground Distance). An example of a calculation is shown at Figure 5-7; and

Photo Distance = 8 cm
Ground Distance = 2 km
cm in 1 km = 100,000

$$\frac{8\text{ cm}}{2\text{ km} \times 100{,}000} = \frac{8}{200{,}000} = 1{:}25{,}000\text{ Scale}$$

**Figure 5-7: Focal length-comparison method**

b. **Focal Length-Flight Altitude Method**. When the marginal information of a photograph includes the focal length and the flight altitude, the scale of the photograph is determined using the formula shown at Figure 5-8.

**English Measurements: Metric Measurements**:

Focal Length (f) = 6 inches - 15.2 centimetres
Flight Altitude*(H) = 10,000 feet - 3,048 metres
Average Ground Elevation*(h) = 850 feet - 259.08 metres

$$\text{Scale} = \frac{F}{H - h}$$

**English Measurements**:

$$\frac{5.\text{ft}}{10,000\text{ ft} - 850\text{ ft}} = \frac{5}{9150} = \frac{1}{18,300} \text{ or 1:18,300 Scale}$$

**Metric Measurements**:

$$\frac{15.2}{(3,048 - 259.08) \times 100} = \frac{15.2}{278,900} = \frac{1}{18,300} \text{ or 1:18,300 Scale}$$

* Altitude and elevation are measured Above Sea Level (**ASL**)

**Figure 5-8: Focal length-flight altitude method**

## SECTION 6
## IMINT COLLECTION MANAGEMENT

### GENERAL

74. IMINT is used at all levels of command, however exploitation is performed only where IAs are assigned. IMINT products are provided to lower echelons upon request or when required. IMINT is normally fused with information from other sources to develop all-source intelligence products.

### IMINT ACTIVITY

75. **National Level**. At national level, efforts are undertaken to provide a variety of imagery products in support of army operations. These efforts include co-ordination activities with allies for particular imagery

support and products. IAs at the Directorate of Imagery Exploitation provide imagery analysis support to Army formations and units participating in operations.

76. **Corps.** Aerial reconnaissance and surveillance support for 10 Allied Corps is provided by dedicated aerial reconnaissance resources employing aerial photographic, infra-red, and radar imagery. The imagery exploitation company of the corps intelligence battalion provides imagery exploitation support.

77. **Division.** Limited imagery collection resources exist at Division. Consequently, a division normally requests and receives IMINT support from Corps or national level. A ground sensor terminal may be allocated to divisions for near real-time read-out of SLAR imagery. The Division lacks sufficient IAs to perform rapid, detailed analysis for large-scale tasks.

78. Some allied forces may make use of the Joint Surveillance Target Attack Radar System (JSTARS) Ground Station Module (GSM) at Corps and Division to provide soft-copy (digital) print-outs for targeting, briefings, and map up-dates.

79. **Brigade Group, Brigade and Unit**. At levels below Division, intelligence staffs rely on digital surveillance devices to provide imagery. Digital surveillance cameras may be mounted on the helicopters assigned to a formation, installed on observation posts, or in the form of digital cameras carried by patrol members. In addition, vehicles such as COYOTE can acquire and store digital images. Imagery, which cannot be obtained through resources under command, is often available upon request to higher intelligence staffs.

80. IAs are not available to exploit imagery at levels below Division. Although detailed imagery interpretation is a specialist function, less sophisticated photograph reading may be carried out by any unit to supplement the information found in maps.

## RESPONSIBILITIES OF INTELLIGENCE STAFFS

81. Intelligence staffs at all levels are responsible for:

a. receiving and co-ordinating all land force requests for air reconnaissance;

b. co-ordinating and fulfilling requests for the interpretation of air photographs, through the imagery interpretation elements of the intelligence company or battalion at higher HQs; and

c. arranging for the dissemination of intelligence gained from the interpretation of air photographs.

## REQUIREMENTS MANAGEMENT PROCESS

82. The major steps in the requirements management process are administration, database check, consolidation, prioritisation, and requirements development.

83. **Administration.** All requests for imagery are received by the intelligence staff and registered. Air reconnaissance requests retain the control number assigned by the originating HQ. Once this is accomplished, the next step is to determine the validity of the requirement.

84. **Database Check.** The requirement is checked to establish whether the request can be satisfied from an existing database. The all-source databases are checked, while the IA element in the intelligence staff/unit checks the master cover trace, target folders, overlays, mission logs, and national-system templating materials.

85. **Consolidation.** Consolidation is the key to the efficient use of imagery resources. To avoid duplication of effort, new requirements are incorporated into existing taskings whenever possible. This does not preclude redundant tasking of different sensors to exploit various target signatures such as radar, photographic, and thermal. Redundant tasking and sensor mix are also used when deception is suspected.

86. The choice of sensor and the selection of the most survivable platform are the most important considerations when validating immediate requests and consolidating requests into pre-planned missions. It is important to determine whether the mission value warrants sensor platform risk, or whether the mission would be better and more safely accomplished using the more sophisticated sensor platforms available at higher echelons.

These decisions are made by the operations staff based on advice from the TACP.

87. **Prioritization.** At all echelons, establishing and up-dating priorities may be the most difficult collection management step. Setting priorities requires thorough consideration of the Commander's guidance, the requester's priority and mission, the current situation, and probable adversary courses of action.

88. Priorities usually change as the operational situation develops. Low-priority tasks may be satisfied if they are integrated with higher-priority tasks during the consolidation stage. Priorities are normally associated with levels of interference with operations, or the need to gather information on critical concerns for the operation.

89. **Requirements Development.** During this stage, requirements are translated into indicators and specific requests for imagery that are clearly understandable by the imagery collection asset. Indicators of activity that are detectable by interpreting IMINT materials include:

a. **Spoil**. The tone, texture and pattern of freshly turned earth points to the construction of trenches and emplacements. Infra-red false colour films, while not commonly used, can be particularly useful in reconnaissance of this nature. Other film types and thermal sensors can also be used;

b. **Track and Vehicle Activity**. Most off-road tracks are readily detected on aerial photography. Moving target indicator radars are capable of detecting vehicle movement at considerable distances. Infra-red detectors are able to accurately identify vehicles both day and night;

c. **Camouflage**. Unless camouflage is very well used, camouflage attempts are ready indicators of military activity. Modern camouflage technology is improving the ability to defeat infra-red and radar sensors;

d. **Presence or Lack of Activity**. Imagery of activity, or lack of activity, can suggest future battlefield developments. Caution must be exercised, however, when applying doctrinal templates to activity detected through imagery or other means given that templates are just a general guide and bear no relation to the actual situation;

e. **Personnel**. Camouflage, troop discipline, dispersion, concealment, and cover make the task of detecting soldiers difficult using optical sensors and airborne radars. IR detectors offer some chance of locating soldiers under a wide variety of circumstances, however it is seldom possible to conduct area searches with infra-red detectors. Therefore, maximum use is made of cueing from other sensors and disciplines;

f. **Artillery**. Discovering artillery positions on images is an important IA task. The position of artillery relative to other components of a land force, and the presence of ammunition stocks, are important indicators of adversary intentions;

g. **HQ and Command Posts**. The size and activity of command posts (CPs) varies with the echelon of command. Division and higher echelon CPs and HQs are larger and easier to detect by a variety of sensors than lower level HQs and CPs; and

h. **Minefield Detection**. Advanced SAR systems are one of the imaging systems which have proven to be valuable in identifying minefields.

## RECONNAISSANCE AND SURVEILLANCE REQUESTS

90. Requests for aerial reconnaissance and surveillance may originate at any level of command, and in a variety of forms. These may vary from requests for intelligence information to those tasks that are specified as air reconnaissance requests. The Air Reconnaissance Request/Task Message format, shown at Figure 5-8, is used when imagery products are desired.

| SERIAL | INFORMATION |
|---|---|
| | NATO CLASSIFICATION |
| | REQUESTOR |
| | DATE-TIME GROUP |
| | FROM: |
| | TO: |
| | INFO: |
| L- ORIGINATOR SERIAL NO. | L-AIR RECCE REQUEST/AIR RECCE TASK NO: |
| M.1 TYPE OF SENSOR | M.1 A-PHOTO B-ELECTRONIC C-SLAR D-IR E-BEST SUITABLE |
| M.2 TECHNIQUE | M.2 A-VERTICAL B-OBLIQUE C-PANORAMIC D-BEST POSSIBLE |
| N MAP SERIES SHEET NO. AND EDITION NO. | N- |
| O.1 TARGET LOCATION | O.1- |
| 0.2 TARGET DESCRIPTION | O.2 |
| P OBJECT AND RESULTS DESIRED(TARGET CATEGORY) | P- |
| Q PHOTO SCALE | Q- <> BEST POSSIBLE |
| R NO. PRINTS, PLOTS, REPORTS | R- |
| S DELIVERY ADDRESS -DATE-TIME REQ | S- |
| T LATEST ACCEPTABLE DATE TIME FOR DELIVERY | T- NLT Z |
| U SPECIAL INSTRUCTIONS<br>U.1 TOT<br>U.2 PRIORITY<br>U.3 TARGET SECURITY CLASS<br>U.4 REMARKS | <br>U.1-<br>U.2 - <> PRI-1 <> PRI-2 <> PRI-3<br>U.3-<br>U.4- |
| V TASKING INSTRUCTIONS | V- |
| | COPIES TO:<br>DRAFTER TEL NO<br>RELEASER TEL NO. |

**Figure 5-9: Air reconnaissance request/task message**

91. Once a requirement becomes an air reconnaissance request, it is forwarded through designated channels according to the type of requirement. Requests which can be met by tactical air resources are forwarded to the appropriate air operations element, while requests requiring strategic, national or allied resources are passed to higher HQ for action.

92. Additional information pertaining to requests is found at Section 4.

## SECTION 7
## IMAGERY ANALYSIS

### GENERAL

93. Imagery analysis is a highly technical process requiring trained individuals who can produce accurate and timely IMINT.

### THE IMAGERY ANALYST

94. IAs are intelligence specialists trained in the techniques of extracting information from imagery gained mainly from aerial sensors. To be successful, IAs require interpretation skills, an aptitude for interpretation work, and an understanding of threat tactics, the situation, the geography and culture in the A O, and adversary ground ORBATs. IAs must be able to :

a. recognise, identify, locate, describe, and report information concerning objects, activities, and terrain on imagery; and

b. analyse the associations between visible objects and configurations, and the consequences of these in terms of adversary strengths, dispositions, and intentions.

95. IAs are normally located where they have immediate access to reconnaissance aircraft/aviation squadrons, film processing equipment, and IMINT dissemination means.

96. **Duties.** IAs report their finds so that users understand both the meaning and reliability of the information disseminated.

97. Specific duties of the IA include:

a. analysing imagery and reporting specific information on threat operations, activities, dispositions, logistics, communications, installations, and civilian activities in support of military operations;

b. preparing and maintaining imagery to supplement and update maps for specific operational planning purposes;

c. preparing target folders and BDA; and

d. preparing mosaics and terrain models for operational planning.

98. **Effectiveness.** IAs are most effective when they know exactly what information is requested or desired. Their effectiveness is also enhanced when the following materials and knowledge are available:

a. area studies, other background material, and selected intelligence reports which deal with the threat and the area of operation;

b. op Os which identify intelligence requirements and areas of specific interest;

c. knowledge of the capabilities and limitations of the supporting platforms and sensors;

d. knowledge of current threat tactics, equipment, battlefield losses, etc; and

e. information from other sources to assist in confirming imagery analysis.

99. **Analytical Skills.** IAs employ a variety of interdependent and complementary skills to produce imagery reports and related products.

Imagery exploitation skills include plotting, photogrammetry, target detection, identification, analysis and writing skills.

100. **Plotting**. When an IA first receives the imagery of a mission, the imagery is registered and a plot of the mission is recorded on a map overlay. Registration involves the comparison of map and image data to enable the precise positioning of objects on the ground. Interpretation plots are retained and become part of the all-source intelligence database. The overlay, which collates all imagery received by an Imagery Analysis Section, is called a Master Cover Trace.

101. **Photogrammetry**. Photogrammetry includes the precise measurement and computation required in imagery analysis. Measurements of objects as they appear on imagery can be used to compute lengths, widths, heights, and imagery scale. Photogrammetry can be used to provide information on:

a. vehicle and equipment dimensions, as an aid to identification and for technical analysis;

b. building and storage facility sizes and capacities;

c. bridge, road, and other lines-of-communication dimensions;

d. image scale;

e. speed and direction of movement of objects;

f. distance between objects; and

g. targeting requirements.

102. The photogrammetric process can be difficult and time-consuming. Vertical images are straightforward and quick to measure, however measurement activity for oblique and panoramic images is both difficult and time-consuming. Because of normal reporting time constraints, it is seldom possible to complete detailed measurements under tactical conditions. At national level, automation and specialisation enable quick and precise mensuration.

103. **Target Detection, Identification and Analysis.** The IA's first responsibility is the detection and accurate identification of areas and activities for situation and target development purposes. This can be done through near-real time analysis of digital imagery. It can also be performed through the analysis of hard copy or other permanent record imagery under less severe time constraints. Some systems limit the analyst to detection, while others allow confident identification and technical analysis.

104. Target detection begins with one of two modes of search: general and specific. General search is undertaken in response to requests for area R & S and involves the examination of every square inch of imagery within a given period of time. Requests for general search should be kept to a minimum. The volume of imagery produced by modern systems normally prevents a timely response to such requests. Specific search is undertaken in response to requests for pin-point, strip and line reconnaissance. It is limited in both scope and objectives.

105. Target identification consists of the interpretation of visual cues or distinctive features of objects detected during the search. The distinctive features are analysed based on their size, shape, shadow, shade, surroundings, and signal strength. The depth of analysis is highly dependent on the time constraints of the reporting system and the purpose of the analysis. Target identification may include:

a. identifying equipment and its use by adversary forces;

b. determining the purpose and composition of waterways, airfields, roadways, railways, installations, etc;

c. determining the ORBAT of adversary units at different echelons; and

d. identifying and detecting friendly units and equipment.

## EXPLOITATION

106. IAs at operational or strategic level may be required to produce reports of greater scope and detail than is possible at tactical level. This may include:

a. detailed analysis associated with detecting unusual objects, previously unknown equipment, novel modifications to known equipment, and unusual concentrations of military objects or personnel;

b. function analysis of an object, equipment, or environmental modification; and

c. ORBAT analysis, where the analyst studies the association between equipment and formations, and the implications of their deployment in certain scenarios. Analysts engaged in ORBAT studies must have access to all-source intelligence.

107. **Briefing and Debriefing.** Pre-flight briefings and post-flight debriefings are conducted for the aircrew, aerial observers, and aerial intelligence specialists. They are a means of ensuring the best use of aerial reconnaissance and surveillance resources. These briefings and debriefings are normally conducted by air intelligence staff, with results of interest to combat intelligence staffs made available in one form or another.

108. **Imagery Annotation.** Imagery is annotated when requested or if the imagery intelligence officer decides that this is necessary to amplify a written imagery report.

109. The following annotations are always included on images:

a. a title strip including a grid reference for the illustrated target and the date-time group of the imagery;

b. a reference point to illustrate the geographical reference quoted in the title strip; and

c. an orientation aid in the form of a north-south arrowhead.

110. The target category, target description, and interpretation annotations may be added.

111. The following guidelines generally apply:

a. lettering is alphanumeric, clearly readable, and water resistant;

b. annotations may be made by handwriting, stencil or adhesive lettering;

c. annotations cover the minimum area necessary, and do not obscure target detail;

d. permanent target areas are outlined by a distinctive angular pattern;

e. temporary target areas are marked by a curved, interrupted line; and

f. moving targets are underlined with an arrowhead showing the direction of movement.

## IMAGERY INTELLIGENCE SUMMARY

112. The realm of imagery intelligence is undergoing a rapid transformation- from paper and plastic images to digital ones. The longest time delay in digital imagery today may be the period involved in IA. Trends indicate a shift towards unmanned surveillance systems and world-wide accessibility. For intelligence staffs, the challenge is creating the right CIS environment with the appropriate analytical tools and access to the necessary databases within a seamless intelligence architecture. Digital images may be accessed from sensor or sensor unit databases in a matter of seconds. The images may then be expanded, cropped, edited, and compared with similar images at will. The important doctrinal point here is that as technological changes emerge, it will be important to ensure that techniques for exploitation and procedures for tasking and access remain current and relevant. With new technologies it will be quite easy to overwhelm a commander with information in a very short space of time. IMINT is an excellent product that assists the G2/IO to produce the timely, predictive intelligence that the Commander needs to understand the battlefield, maintain operational tempo and influence the decision cycle of the adversary.

# CHAPTER 6
# SIGNALS INTELLIGENCE

## SECTION 1
## INTRODUCTION

### GENERAL

1. EW is an integral part of IO and ISTAR along with physical destruction, PSYOPs, deception, and OPSEC, EW may be applied as part of offensive and defensive IO as explained in B-GL-300-005 *Information Operations*. Personnel employed as EW analysts must be capable of visualizing the battlefield in the context of the EM spectrum.[25]

2. Important EW definitions are as follows:

   a. **Electronic Warfare.** EW is defined as "Military action to exploit the EM spectrum which encompasses the interception and identification of EM emissions, the employment of EM energy, including directed energy, to reduce or prevent hostile use of the EM spectrum and actions to ensure its effective use by friendly forces". EW is sub-divided into three categories: Electronic Warfare support Measures (ESM), ECM and Electronic Protective Measures (EPM);

   b. **Electronic Warfare Support Measures.** ESM is defined as "That division of EW involving actions taken to search for, intercept and identify EM emissions and locate their sources for the purpose of immediate threat recognition. It provides a source of information required for immediate decisions involving ECM, EPM and other tactical actions"

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[25] In training, intelligence personnel must begin with nonmathematical radio theory as a key to understanding both targets and our own sensors. This chapter must be read in conjunction with B-GL-353-001/FP001 *Electronic Warfare* for training purposes in order to gain a detailed understanding of EW.

c. **Electronic Counter Measures.** ECM is defined as "That division of EW involving actions taken to prevent or reduce an enemy's effective use of the EM spectrum through the use of EM energy. There are three subdivisions of ECM - electronic jamming, electronic deception and electronic neutralization" and

d. **Electronic Protective Measures.** EPM is defined as "That division of EW involving actions taken to ensure friendly effective use of the EM spectrum despite the enemy's use of EM energy".

3. SIGINT definitions are contained in Chapter 1. SIGINT is normally classified as:

a. **COMINT**. COMINT is derived from communications-related transmissions, such as intercepted radio traffic; and

b. **ELINT**. ELINT is derived from non-communications-related electronic emissions from radars, navigational devices, and similar equipment.

4. The functions of search, intercept, identification and location are common to both ESM and SIGINT operations. ESM and SIGINT operations are conducted before and during hostilities and are routinely practised in military exercises. Differences between ESM and SIGINT arise in the purpose and employment of these functions and the use of the derived information. The purpose for which operations are performed is to be the basic criterion for determining whether they are to be described as ESM or SIGINT operations. Close co-ordination between ESM and SIGINT is necessary, especially when separate resources are employed.

5. The distinction between ESM and SIGINT has blurred. ESM was considered time perishable information that was required for threat warning and necessary information to conduct ECM. Within the context of land forces SIGINT techniques are often required to provide threat warning. Another issue is the requirement for highly classified SIGINT databases to conduct ESM. Cryptanalysis will always be considered SIGINT and be

controlled by the national evel SIGINT authority. Information provided by EW units to the ASC for the purpose of SA would be considered SIGINT.

6. **Capabilities**. EW is an essential element of combat power, providing commanders with a passive and an active means to protect their C2 systems and to attack hostile C2 systems. The EW system has the capability to:

a. identify, locate, track and monitor the activities of adversary combat, fire support, reconnaissance, surveillance and TA resources;

b. deceive adversary force commanders by jamming specific adversary force C2 facilities in support of friendly battlefield deception operations;

c. create time delays in the adversary force commander's decision cycle by disrupting specific C2 and intelligence capabilities;

d. provide combat information and targeting data for both manoeuvre and fire support units;

e. protect friendly C2 and CIS systems; and

f. augment the efforts of manoeuvre and fire support elements to suppress, neutralize, and destroy adversary C2 facilities.

## THE THREAT

7. All military forces use camouflage, cover and concealment, radio silence, emission control (EMCON), and disinformation to protect their respective C2 activities and combat operations. Adversary force SIGINT means, or radio and radio-radar reconnaissance resources, pose a significant threat to friendly C2 activities and systems at formation and unit level. Adversary force SIGINT elements, as part of their mission to disrupt the C2 capabilities of opposing forces, attempt to identify, locate and target our radiotelephone, radioteletype, multi-channel communications emitters, and radar emitters.

8. To promote our ability to use the EM spectrum and to protect friendly C2 capabilities from adversary force EW efforts, various offensive measures and defensive counter-measures are employed.

## SECTION 2
## CONCEPTS AND EMPLOYMENT

### EW CONCEPTS

9. **Operational Concept**. Offensive EW (ESM and ECM) are conducted by organic EW units at the formation level. Defensive EW (EPM) are conducted by all units. EW units at each level are structured to provide ESM coverage within the Commander's area of interest. In OOTW, EW capabilities can be task tailored to support a Battle Group . The EWCC provides the interface between organic EW units and commander and formation staff. The EWCC is normally co-located with the ASC.

10. **ESM/SIGINT Analysis.** ESM provides commanders with the capability to search for, intercept, locate, identify, and exploit radiated EM energy from adversary force emitters for intelligence purposes ESM/SIGINT are considered a single source of intelligence. In fact ESM/SIGINT are multiple sources. For example traditional radio voice intercept, radar intercept, direction finding, signal development and cryptanalysis are separate ESM/SIGINT disciplines. The fact that the EWCC provides the product make ESM/ SIGINT a single source. In order to provide useful products to the ASC from EW sensors, EW units must conduct analysis. Some analysis is conducted by the sensor equipment , however most data requires human input to build an ESM/ SIGINT picture. ESM/ SIGINT products contribute to the Commander's SA, providing within limits TA information and immediate threat warning. ESM /SIGINT analysts must have a detailed understanding of the EM spectrum and the capabilities and limitations of the EW sensors. ESM/ SIGINT analysts cannot work in isolation from other sources who may significantly clarify the SIGINT picture. Development and maintenance of the ESM/SIGINT database is an EWCC responsibility. Linkage to national SIGINT systems and agencies are vital to effective EW/SIGINT operations.

11. ESM/SIGINT (including direction finding systems) will be a principle means of initially locating HVT and HPT. ESM/ SIGINT can in some instances provide targeting information with enough accuracy for

other hard kill weapons (for example the adversary may inadvertently provide his location). However ESM/SIGINT normally will not be able to provide accurate enough information from direction finding systems for direct engagement of targets. ESM systems can queue other ISTAR resources such as reconnaissance troops, UAVs and aviation resources where to "look" and thus provide the TA information.

12. **ECM**. EW units are rather unique in that they are capable of providing excellent sensor (ESM)- to- shooter (ECM) linkages. EW analysts must not forget that they are not only providing SIGINT for development of ASA but providing targeting information for conducting ECM. EWCC controls, on behalf of the Commander, the formation ECM effort in conjunction with the targeting process. This targeting function is critical to determining which CIS activities are most vital to the adversary and steer ECM to the best targets. Electronic deception is conducted as a part of a commander's overall deception plan. In general, electronic deception is conducted by all units with emitters that can simulate activity that will detectable by the adversary ESM/SIGINT capability.

13. **ECM is a double-edged sword**. Conducting ECM effects friendly use of the EM spectrum as well as the adversary's. Uncoordinated ECM will adversely affect friendly CIS and friendly intelligence (ESM/SIGINT) gathering activities. The EWCC is responsible for the co-ordination of all ECM activity on behalf of the Commander to minimise the effects on friendly activities. Planned ECM is well coordinated and controlled at the highest practical level. Nonetheless, control of ECM is decentralized to the greatest extent possible to achieve the degree of flexibility and responsiveness needed by lower lever commanders to respond to targets of opportunity. Accordingly, immediate employment of ECM resources may be permitted when the supported formation commander assesses that the use of ECM resources will significantly contribute to the success of an on-going or imminent combat operation. B-GL-354-001 *Electronic Warfare* details procedures for control of ECM.

14. **EPM**. EPM involves passive actions taken by all soldiers using communications and electronics equipment to protect CIS systems against an adversary's EW. EPM may be:

a. technical, through the use of superior CIS equipment;

b. procedural, through the use of anti-jamming drills, radio operator training, and communication net discipline; or

c. tactical, through the use of EMCON and the careful siting of C2 facilities.

15. Commanders set EMCON policies based on advice principally from G3, G2, G6 and the EWCC. This policy is based on the estimate of the ESM/SIGINT collection capabilities of the adversary and weighing them against the need for security and effectiveness of the CIS. -The imposition of EMCON measures necessitates, to varying degrees, increased reliance on alternative methods of communication, such as line, signal dispatch service, and liaison. Adopting strict EMCON measures invariably slows the ability of a formation to gather information for processing into intelligence. The G2 and G3 must also co-ordinate the EMCON policies in the context of deception plans. Electronic deception, for example, conducted in an environment of electronic or radio silence requires special measures in order for transmissions to be credible to the adversary.

16. Standard EPM procedures such as antenna siting and power output do not normally require G2 involvement. In rare instances where EPM SOP's may influence planned deception operations, G2, G3, the formation signals officer and the EWCC co-ordinate their efforts. The G2 staff also advises signals on the effectiveness of standard EPM measures through the CI analysis process at the ASC.

17. **Strengths and Limitations**. Like any other collection capability within an ISTAR system, ESM/SIGINT has various strengths and weaknesses. Ground based ESM provides a commander with a 24/7,all weather wide area collection capability. Distances for intercept will vary with the particular frequency band and the power of the emitter that is being exploited. Some signals require line of sight while others do not. It is not unusual to be able to intercept signals 50-75 km from the collection sight. Elevated platforms such as aircraft, helicopters and UAVs can significantly increase the range of intercept and eliminate line of sight problems. Direction finding accuracy is generally distance dependant and the accuracy of the system drops off significantly. Clearly ESM is dependant on the adversary use of the EM spectrum. If he does not use his systems they cannot be exploited as demonstrated during the Gulf War. Generally speaking, however, there are always signals to exploit. Deception is always possible and the ESM/SIGINT collectors can be fed false information like any other sensor. ESM/SIGINT analysts need to be aware of this.

## INTELLIGENCE SUPPORT TO EW OPERATIONS

18. **HUMINT Support.** From HUMINT sources, captured adversary CEOIs or photographs of adversary code book contents can be invaluable. HUMINT sources can also report on the effectiveness of friendly ECM activity, problems encountered with adversary communications equipment, the arrival of new equipment and weapon systems behind adversary lines, and so forth.

19. **IMINT Support**. IMINT sources may provide adversary location information of value during jamming or intercept activities. Photographs of emitter antennas can lead analysts to determine frequency data and other technical characteristics of adversary electronic systems. Photographs of an adversary CP or operational weapons site may provide information about which transmissions and emissions are associated with specific HQs, units or weapon systems.

20. **SIGINT Support**. ESM is critically dependant on the provision of databases provided by national level SIGINT organizations. An extensive adversary electronic order of battle (EOB) database must be available before adversary EM emissions can be effectively intercepted, identified, and located. Intercept operations require detailed intelligence on adversary frequency allocation and signal operating procedures. Identification is assisted by a thorough knowledge of adversary signal operating procedures, languages and jargon used, technical parameters of signals associated with specific functions or echelons, and the patterns associated with emitters during particular combat operations. Complex node analysis and parametric analysis of intercepted signals contributes to SIGINT support of EW operations. SIGINT provides the greatest volume of intelligence support to EW operations. Generally, ESM produces combat information which can be used for ECM, manoeuvre, or threat avoidance with little systematic analysis or processing. SIGINT is derived after more extensive signals information processing.

21. **TECHINT Support**. Analysts examining captured adversary communications and electronic emitter equipment, manuals and other publications can provide assessments of use to signals units and operators.

22. **Intelligence Required for ECM.** Intelligence requirements associated with ESM are also applicable to ECM activities. ESM provides the targeting information necessary to conduct ECM. In particular:

a. **Jamming**. To be most effective, jamming resources require sufficient information on the adversary C2 system to enable operators to anticipate the effects of disrupting a particular communications link; and

b. **Electronic Deception**. Both manipulative and simulative deception activities require intelligence on adversary SIGINT and ESM capabilities, and a knowledge of friendly emission patterns and profiles. It would serve no purpose to simulate a friendly net or radar surveillance system if the adversary could not intercept or recognize these transmissions. Even the most simple imitative deception attempt, one designed to deceive only the operator of a clear voice net for only a few minutes, requires some knowledge of the target station's identity and the purpose of the net. A more sophisticated effort, one designed to confuse an adversary decision-maker, requires not only knowledge of the adversary communications system but also intelligence concerning the adversary decision-making process. A significant level of intelligence support is required if the deception effort involves intrusion into, or imitation of, an encrypted signal.

23. **Intelligence Required for EPM.** EPM includes those measures designed to counter ESM and those designed to counter ECM. Intelligence requirements for anti-ESM activities are similar to the requirements for manipulative and simulative electronic deception. In particular, intelligence must be developed on the adversary's assessment of our abilities to defeat the adversary SIGINT and ESM capability. The anti-ECM effort requires technical information on the capabilities of adversary jammers and any intelligence on the capability of adversary forces to accomplish electronic deception. Adversary doctrine on deception, and information on the availability of equipment necessary for adversary deception operations, is important. Multi-disciplined intelligence efforts to obtain information on adversary ECM equipment before such equipment is deployed is necessary to develop effective EPM policies and approaches.

## EW SUPPORT TO INTELLIGENCE

24. ESM/SIGINT can provide the following:

a. adversary intentions, including:

(1) timings;

(2) deployments and locations;

(3) operational concepts; and

(4) use of follow-on echelons and reserves; and

b. adversary capabilities, including:

(1) ORBAT information;

(2) strengths of adversary forces;

(3) morale;

(4) quality of command and control; and

(5) the state of weapons and equipment.

25. SIGINT information can serve as an excellent basis of information to begin the confirmation and validation process. Through early SIGINT reports, HUMINT and IMINT sources can be tasked to intensify or re-direct the focus of their information gathering onto issues of concern discovered through SIGINT intercepts. SIGINT is not only used in the TA role, but also in target engagement and battle damage assessment roles as well.

## EW AND INTELLIGENCE CO-ORDINATION

26. Co-ordination is effected at the main HQ of the supported formation. The EWCC and the ASC are co-located and are normally within walking distance of the CP. This allows the EW operations o or officer commanding to liaise with the operations and artillery staffs on ECM issues

and deployments. It also promotes continuous EW-intelligence co-ordination.

27. **Brigade G2s and EWLOs.** EWLOs may be deployed to various levels that do not have an EW capability. The EWLO acts as that formation or units means of accessing the EW system. EWLOs co-ordinate EW activities on behalf of the supported commander in the same way an EWCC does. The EWLO will interface with the operations , intelligence and fire support staffs to integrate EW at that level. G2s and unit IOs must, however, remain aware that such reports are single-source products that have not been analyzed from an all-source perspective.

# CHAPTER 7
# TECHNICAL INTELLIGENCE

## SECTION 1
## INTRODUCTION

### GENERAL

1. Battlefield TECHINT is the exploitation of foreign materials to support the Commander's mission. TECHINT aids the commander by providing products that either identify or counter an adversary's momentary technological advantage.

2. The battlefield TECHINT process applies to Corps and below. The battlefield TECHINT system is supported by national and allied intelligence agencies, and is an integral part of the all-source intelligence system.

3. TECHINT provides distinct input to the all-source intelligence product by way of:

   a. assessment of capabilities and vulnerabilities of newly deployed adversary weapons systems;

   b. warning of changes in adversary tactics/employment due to new or developing technology;

   c. counter-measures to new technology or tactics; and

   d. translation and interpretation of opposing force documents.

### TECHINT TYPES

4. The TECHINT system involves:

   a. **Scientific and Technical Intelligence**. J2 Scientific and Technological Intelligence (J2STI) conducts scientific and technical intelligence activities at the strategic level.

Analysis of adversary weapons systems is conducted to prevent strategic technological surprise; and

b. **Battlefield TECHINT**. Battlefield TECHINT serves the Commander's IRat the operational level of command. At the Corps intelligence unit, TECHINT specialists provide operational and tactical commanders with information on new weapons or support systems used by adversary forces, and participate in the exploitation/evacuation process when captured adversary documents and captured adversary equipment are acquired.

5. TECHINT includes the following:

a. **Documentary Intelligence.** DOCINT is gained from the analysis of CE, associated technical documents (ATD) captured with CE, and information derived from various published or unpublished materials. Documents captured in the possession of PWs are handled in accordance with the procedures detailed Sect 4 and Annex J of Chapter 4. Comprehensive exploitation of CE/ATD and PWs is coordinated at Corps by the intelligence unit; and

b. **Measurements and Signatures Intelligence.** MASINT exploitation activity is conducted at strategic level. MASINT is derived from the quantitative and qualitative analysis of data (metric, angle, spatial, wavelength, time dependence, modulation, plasma, and hydromagnetics) obtained by specific technical sensor systems. Such intelligence identifies distinctive technical features associated with adversary force EM sources or seismic emitters. EW units in the Combat Zone conduct limited battlefield signature analysis. Allied forces may divide MASINT into radar intelligence (RADINT) and seismic intelligence.

## SECTION 2
## SOURCES AND STRUCTURES

### TECHINT SOURCES

6. TECHINT analysts study a broad range of raw material to provide important TECHINT products. Adversary force technical data and information is gained from the analysis of foreign weapons, weapon systems, military equipment, and documents in service or under development. Common sources for this raw information include:

a. CE and CD;

b. defectors, agents, civilians and PWs;

c. imagery;

d. sensor data; and

e. emissions, effects and residue from adversary weapon systems and other equipment.

### TECHINT STRUCTURES

7. Battlefield TECHINT services are provided by TECHINT resources found within the Corps intelligence unit In a coalition force, the same capabilities could be provided by an allied operational level or theatre level unit. TECHINT support could be expected to provide:

a. **Direct Intelligence Support.** This consists of mobile TECHINT teams tasked to implement CMEC directives on the battlefield;

b. **Communications and Electronics Analysis.** This function examines adversary force communications, radars, EW resources, EO systems, and directed energy weapons systems;

c. **NBCD and Medical Analysis**. This function examines NBCD offensive and defensive systems as well as adversary force medical material;

d. **Weapons and Munitions Analysis**. This function examines adversary force weapons, support systems, fire control systems as well as terminal weapons effects, e.g. crater analysis; and

e. **Mobility Analysis**. This function examines adversary force vehicles, engineer equipment, material handing equipment, and power generation equipment.

8. **Captured Material Exploitation Centre** . At the appropriate level of command, a CMEC is formed by adding subject matter experts from other services, allies, and J2STI as the situation demands. Ideally, the CMEC is located in the theatre rear area near main supply routes. The provision of special analysis equipment allows TECHINT specialists to perform more detailed exploitation than TECHINT teams are able to provide in the theatre operations zone.

9. The CMEC:

a. conducts detailed exploitation of CE, ATD, and CE;

b. analyses friendly weapon systems damaged in battle;

c. manages the battlefield TECHINT on behalf of the operational or theatre level intelligence unit, the J2 or CJ2;

d. produces TECHINT reports and training material for tactical commanders;

e. co-ordinates evacuation of CD and CE to national facilities;

f. co-ordinates national support to TECHINT operations; and

g. maintains a TECHINT database.

10. When the CMEC receives captured material, an evaluation of the material is conducted to determine the level of TECHINT interest and importance associated with the acquisition. Items of particular concern are exploited for immediate tactical or operational level use. Any immediate counter-measures, technical information, or intelligence developed is quickly disseminated for practical use by combat elements. Concurrently, the CMEC ensures the evacuation of priority material to national exploitation facilities.

11. **Joint CMEC (JCMEC)**. On occasion, different armed services combine resources for the collection and exploitation of foreign technical material. On these occasions the CMEC becomes the Joint Captured Material Exploitation Centre (JCMEC).

12. **Combined CMEC (CCMEC)**. When a CMEC is combined with other NATO or allied exploitation centres, the CMEC becomes a CCMEC.

13. **Direct Support Battlefield TECHINT Teams**. These mobile teams assist in implementing the TECHINT Plan, and are organised according to available resources and subordinate command requirements. Normally, the teams have four specialists, one for each of the specialities found in the CMEC. The direct support TECHINT teams are detached to lower formations to:

a. conduct battlefield collection;

b. conduct initial identification and exploitation activities;

c. support CMEC collection management;

d. provide TECHINT to the ASC; and

e. provide assistance to Division, Brigade and Brigade Group G2 staff and intelligence line unit personnel through liaison and training.

## SECTION 3
## TECHINT EXPLOITATION PROCESS

### THE TECHINT PLAN

14. As an example, the Corps commander identifies TECHINT requirements in conjunction with the Corps G2, giving the CMEC specific types of adversary force equipment to target for detailed analysis. The TECHINT platoon commander then develops the TECHINT plan, in conjunction with the Corps G2 staff, for endorsement by the Corps commander.

15. The TECHINT plan (Annex A), included in the intelligence acquisition tasks section of the Intelligence Annex to the Corps Op O:

a. identifies which adversary force materials merit immediate reporting upon capture;

b. allocates TECHINT teams to support specific formations within the Corps; and

c. may detail the Corps commander's policy on certain types of CD, CE, and war trophies.

### DOCUMENTS AND HANDLING

16. **Standardisation**. NATO Forces have standardised the handling and reporting of CD, CE, and ATD with STANAG 2084. The aim of this STANAG is to maximise the intelligence value which efficient exploitation practices can provide.

17. **Documents**. A document is defined as any recorded information, regardless of its physical form or characteristics. Documents include original or reproduction:

a. hand-written notes;

b. printed documents;

c. painted or engraved images;

d. drawings;

e. typed materials;

f. sound or voice recordings;

g. imagery;

h. punched cards;

i. digital material; and

j. electronic data.

18. **Security Classification**. The security classification of CE and CD is dictated by:

a. the intelligence value of the CE and CD;

b. the circumstances of capture; and

c. the value of denying the adversary the knowledge that a particular strategic piece of equipment or document has been captured.

19. **CD/CE Handling and Guarding**. During the exploitation process, CD and CE are handled, secured, and prioritised together. PWs associated with CD and CE are, if possible, kept available for questioning during the exploitation process. A PW tag, referencing this fact, is attached to all PWs as soon as possible after capture to ensure that this occurs. CE (or copies of these documents) associated with a PW follow the PW through the interrogation process.

20. At all stages during the intelligence exploitation process, CE, ATD, and CD are guarded to prevent looting, misuse or destruction.

21. **Source Records**. To assist in exploitation, the following information is provided on the CE/CD tag:

a. **Capturing Unit**. The capturing unit provides the following :

(1) national identifying letters;

(2) designation of capturing unit;

(3) date/time of capture;

(4) place of capture (UTM);

(5) summary of circumstances of capture; and

(6) identification of associated PWs; and

b. **TECHINT Team**. The TECHINT team performing initial exploitation provides:

(1) the serial number of CE of intelligence interest; and

(2) the serial number of ATD and the serial number(s) of the associated CE, clearly marked with the flag word "TECHDOC."

## REPORTS

22. **Reporting Procedures** . Reports are submitted in accordance with relevant reporting procedures. Copies of all reports follow the CD/CE during the exploitation process.

23. **Types of Reports**. The following reports are prepared:

a. **Intelligence Report.** Intelligence reports (INTREP)s identify the CE and its disposition, giving any information of immediate tactical value. Although INTREPs may be submitted in advance of Preliminary Technical Reports

(PRETECHREPs), INTREPs are not substitutes for PRETECHREPs;

b. **PRETECHREP**. PRETECHREPs are prepared and disseminated after preliminary screening by the capturing unit intelligence officer or formation G2;

c. **Complementary Technical Report (COMTECHREP)**. COMTECHREPs are prepared and disseminated by TECHINT teams after initial exploitation has occurred. Of the three formats, the Type C Format shown at Annex B is most commonly used; and

d. **Detailed Technical Report (DETECHREP)**. DETECHREPs are prepared and disseminated by the CMEC after detailed exploitation has occurred.

## CAPTURED EQUIPMENT CATEGORIES

24. CE are exploited as rapidly as possible, whether or not they are associated with CE. CE not associated with CE are separately categorised according to Corps TECHINT priorities to assist in the recognition of CE of potential intelligence value and to facilitate exploitation. These categories are:

a. **Category A**. Documents containing information concerning subjects of priority intelligence interest;

b. **Category B**. Encrypted items and all other documents pertaining to adversary C3I systems;

c. **Category C**. Documents of minor intelligence value; and

d. **Category D**. Documents containing no information of intelligence value.

25. **Category B Handling Considerations**. Due to their sensitive nature, category "B" documents require special, restricted handling. The formation ASC and EWCC is informed of the seizure and disposition of such documents immediately, and their processing upwards is expedited.

## TECHINT EXPLOITATION STAGES

26. All captured adversary materials (CE, ATD, and CE) are exploited during these stages:

a. **Preliminary Screening**. Cursory examination of CE/CE by the capturing Unit IO or formation G2. Any information of immediate tactical value is reported by the capturing unit in an INTREP or PRETECHREP, and the material is passed as soon as possible to a TECHINT team;

b. **Complementary Examination**. Initial identification, examination, translation, and categorisation of the material by TECHINT teams in the Division and Brigade Group operational areas takes place as soon as captured material is provided to the teams. The results are sent by COMTECHREP to the Corps intelligence staff and the CMEC. The team decides whether further analysis is warranted and, if so, secures the material and transports it to the CMEC; and

c. **Detailed Exploitation**. Detailed exploitation occurs at the CMEC. If the material is identified in the TECHINT plan as an item of interest, the CMEC conducts further analysis of the material. TECHINT subject matter experts may be required to participate in the interrogation of certain Category A PWs in possession of CD/CE, and national-level specialists may be required for certain types of analysis. Dissemination of the results of CMEC analysis may lead to counter-measures training conducted by TECHINT teams. The TECHINT platoon develops battlefield exploitation procedures through guidance from three sources:

(1) international test operation procedures;

(2) coordination with J2STI; and

(3) unit experience.

27. **TERA-Related CE**. Documents such as unmarked maps, charts, air imagery and other types of cartographic material and information is forwarded directly to the formation Intelligence unit for exploitation by the TERA section/team. The TECHINT team retains copies of these materials to meet TECHINT requirements. Marked maps, charts and air imagery are handled by the TECHINT system as ordinary types of CE. All combat information gleaned from initial examination is passed to the ASC as quickly as possible.

## SECTION 4
## TECHINT EXPLOITATION CAPABILITIES

### CMEC EXPLOITATION CAPABILITIES

28. **Exploitation Targets**. The TECHINT platoon maintains equipment, procedures and plans for sampling, exploiting, and handling the following material:

a. guided missiles and launching systems;

b. ammunition, mines, demolitions, pyrotechnics and chemical weapons;

c. infantry weapons;

d. sabotage equipment;

e. military vehicles and AFVs;

f. anti-tank, anti-aircraft, field artillery and field rocket weapons;

g. engineer, amphibious and river crossing equipment;

h. communication and non-communication electronic equipment, including night observation devices, surveillance systems, and TA systems;

i. airborne forces equipment;

j. miscellaneous equipment, including:

(1) camouflage equipment;

(2) clothing and personal equipment; and

(3) rations;

k. laser and EO equipment;

l. computer and associated equipment;

m. special weapons including nuclear, biological and chemical warfare equipment, flame and incendiary weapons; and

n. medical equipment.

29. **Explosive Ordnance**. Only explosive ordnance disposal (EOD) personnel handle captured explosive ordnance. These specialists are supplied to the CMEC by Corps engineers, on request of the Corps intelligence battalion, in accordance with EOD mission priorities. TECHINT teams may include EOD specialists for battlefield examination of captured ordinance. The EOD generated INTREP or PRETECHREP notifies G2 and the TECHINT staff of the types and locations of the foreign munitions they encounter through the engineer intelligence staff at Division and Corps headquarters or appropriate coalition operational or theatre level headquarters . TECHINT teams exploit disarmed munitions, disseminating results using the COMTECHREP Type B format.

30. **Captured Medical Supplies and Equipment**. Representative samples of captured medical supplies and equipment must be forwarded through command channels to medical intelligence personnel for evaluation and exploitation. When material cannot be evacuated, medical intelligence specialists are requested to make an on-site evaluation. The capturing unit evacuates all the remaining captured supplies and equipment to designated collecting points where they are stored, maintained and distributed in accordance with established policies.

## JCMEC EXPLOITATION CAPABILITIES

31. **Exploitation Targets**. Other service specialists and subject matter experts are capable of in-theatre exploitation of a wide range of items not considered within the scope of the CMEC. The following are some of the items that would require joint or national exploitation;

a. aircraft, airframe and power plant material;

b. airborne armament and ammunition, bomb sights, gun sights, photographic and other sensors, and associated equipment;

c. avionics and airborne communications;

d. airborne ECM equipment;

e. ground equipment and installations;

f. fuels, lubricants, greases and propellants;

g. air-to-air missiles and associated equipment;

h. equipment for the strategic dispersion of biological and chemical agents, as well as NBCD protective equipment and clothing;

i. airborne laser and directed energy weaponry;

j. cryptographic systems and associated equipment; and

k. miscellaneous equipment, including:

    (1) flying clothing equipment, including G-suits and pressure breathing equipment; and

    (2) medical equipment.

32. **Hostile Aircraft Exploitation Reporting**. The COMTECH-REP Type A format is used for reporting information about aircraft. The

TECHINT team submits the report by the fastest available means immediately following initial examination of adversary aircraft.

33. **National Level Exploitation Capabilities.** Items that are beyond the capability of the CMEC or the JCMEC to analyse fully are forwarded to national level organizations for exploitation.

34. **TECHINT Specialists.** Battlefield TECHINT activities require a variety of specialist skills. Analysts in the TECHINT platoon may be called upon to investigate communication equipment, radars, EO systems, laser weapons, NBCD munitions or protective clothing, battlefield munitions, medical material, aircraft parts, fire control systems, power generation equipment, and much more.

## TECHINT SUMMARY

35. With the extensive proliferation of technology on the modern battlefield, the rapid exploitation of any new or unusual adversary equipment and systems is paramount. For example, in asymmetric warfare, use of cellphones by adversary forces is now the norm. Satellite imagery is available on the Internet. Very soon, sophisticated yet economical UAV surveillance capabilities will be available to all parties involved in a conflict. Friendly forces must gain every advantage possible. Quite simply, the successful technical exploitation of technologies employed by adversary forces will enable friendly force commanders to achieve a technological advantage and the Information Superiority required towin.

## ANNEX A TO CHAPTER 7
## TECHINT INPUT TO THE INTELLIGENCE ANNEX

1. The following is an example of the type of TECHINT input to an Intelligence Annex for an Op O at Corps or at a coalition operational level headquarters. An appendix to this annex could be prepared if extensive, special TECHINT collection was required.

### PIRs

Unusual or unexplained damage to friendly equipment or material?

Unexpected offensive/defensive capabilities of adversary equip?

Is the adversary locating and engaging friendly AFVs in limited visibility, and if so how can this be countered?

**IR**: What are the capabilities and limitations of the upgraded AT-X ATGM?

## AN EXAMPLE OF TECHNICAL INTELLIGENCE ACQUISITION TASKS IN AN OPO

**General**. Any CD/CE will be immediately reported in accordance with the priorities described below:

**1 Div**. Priority of collection of equipment is AT-X, SA-X, and G-X.

**3 Div**. Priority of collection of equipment is individual body armour, BMP-X, and combat net radio systems.

**2 Bde Gp**. Priority of collection of equipment is individual small arms, grenades, and BTR-XX.

**1 Int Bn**. Provide one TECHINT team to support each Division's Intelligence Company; and

Intelligence

Integrate TECHINT operations and teams with TA and engagement operations at Corps.

## HANDLING OF PWS, CE, AND CD

All captured material will be transported to the nearest collection point and held for TECHINT team examination;

Items designated by TECHINT teams as possessing intelligence value will be evacuated to destinations designated by TECHINT team leaders; and

No material will be diverted for other uses until examined and released by TECHINT personnel.

## REPORTS AND DISTRIBUTION

All equipment related INTREPs and PW reports will include CMEC as an info addressee; and

Reports concerning CD will include CMEC as an info addressee.

## LIST OF ABBREVIATIONS

| **Acronym** | **Explanation** |
|---|---|
| **AA** | avenue of approach |
| **ACINT** | acoustic intelligence |
| **ACOC** | air command operations centre |
| **AFV** | armoured fighting vehicle |
| **AGM** | attack guidance matrix |
| **AI** | area of interest |
| **AIO** | artillery intelligence officer |
| **AIR** | area of intelligence responsibility |
| **AMA** | artillery manoeuvre area |
| **AO** | area of operation |
| **ASA** | adversarial situational awareness |
| **ASC** | all-source (intelligence) cell |
| **ASOC** | air support operations centre |
| **ATD** | associated technical document |
| **AVLB** | armoured vehicle launcher bridge |
| **BC** | battery commander |
| **bn** | battalion |
| **BV** | battlefield vision |
| **CCIR** | commander's critical intelligence requirements |
| **CB** | counterbattery |
| **cbt int** | combat intelligence |
| **CCIRM** | control co-ordination information requirements management |
| **CCIC** | corps counter intelligence centre |
| **CCMEC** | combined captured material exploitation centre |
| **CD** | captured document |
| **CE** | captured equipment |
| **CER** | combat engineer regiment |

| Acronym | Explanation |
|---|---|
| **CI** | counter intelligence |
| **CIS** | communications information systems |
| **CMEC** | captured material exploitation centre |
| **CO** | commanding officer |
| **CP** | command post |
| **COA** | course of action |
| **COMINT** | communications intelligence |
| **COMTECHREP** | complementary technical report |
| **DETECHREP** | detailed technical report |
| **DOCINT** | document intelligence |
| **DP** | decision point |
| **DST** | decision support template |
| **DZ** | drop zone |
| **ECM** | electronic counter measures |
| **ELINT** | electronic intelligence |
| **EM** | electromagnetic |
| **EMCON** | emission control |
| **EO** | electro-optic |
| **EOB** | electronic order of battle |
| **EOD** | explosive ordnance disposal |
| **EPM** | electronic protective measure |
| **ESM** | electronic warfare support measure |
| **EV** | environmental vision |
| **EW** | electronic warfare |
| **EWCC** | electronic warfare co-ordination centre |
| **FEBA** | forward edge of the battle area |
| **FHT** | field HUMINT team |
| **FLIR** | forward looking infra-red |
| **FLOCARK** | mnemonic for terrain evaluation representing: |

| Acronym | Explanation |
|---|---|
| | feature, lanes, objectives, canalizing ground, approaches, rate avenues of approach, key terrain. |
| **FLOT** | forward line own troops |
| **FOO** | forward observation officer |
| **FSE** | fire support element |
| **FSCC** | fire support co-ordination centre |
| **FSO** | fire support officer |
| **frag O** | fragmentary order |
| **GCS** | ground control station |
| **GLO** | ground liaison officer |
| **GSM** | ground station module |
| **HELQUEST** | helicopter request |
| **HPT** | high payoff target |
| **HPTL** | high payoff target list |
| **HUMINT** | human intelligence |
| **HVT** | high value target |
| **HVTL** | high value target list |
| **IA** | imagery analyst |
| **ICRC** | International Commission of the Red Cross |
| **ICAC** | intelligence collection and analysis centre |
| **ICP** | intelligence collection plan |
| **IE** | imagery exploitation |
| **IEW** | intelligence and electronic warfare |
| **IMINT** | imagery intelligence |
| **INFLTREP** | in-flight report |
| **INTREP** | intelligence report |
| **INTSUM** | intelligence summary |
| **IO** | information operations |
| **IPB** | intelligence preparation of the battlefield |

| Acronym | Explanation |
|---|---|
| **IR** | information requirement |
| **IRLS** | infra-red line scan |
| **ISTAR** | intelligence, surveillance, target acquisition and reconnaissance |
| **J2STI** | J2 scientific and technical intelligence |
| **JARIB** | joint air reconnaissance intelligence board |
| **JARIC** | joint air reconnaissance intelligence board |
| **JCMEC** | joint captured material exploitation centre |
| **JCOC** | joint command operation centre |
| **JRC** | joint reconnaissance centre |
| **JSTARS** | joint surveillance target attack rardar system |
| **KT** | key terrain |
| **KZ** | killing zone |
| **LADAR** | laser detection and range finding |
| **LASINT** | laser intelligence |
| **LO** | liaison officer |
| **LZ** | landing zone |
| **MASINT** | measurement and signature intelligence |
| **MC** | mobility corridor |
| **MCOO** | modified combined obstacle overlay |
| **met** | Meteorology |
| **MRR** | motor rifle regiment |
| **MISREP** | mission report |
| **NCIU** | national counter intelligence unit |
| **NCE** | national command element |
| **OCOKA** | mnemonic to remember details of terrain evaluation used by US army representing observations and fields of fire, concealment and cover, obstacles, key terrain, avenues of approach |

| **Acronym** | **Explanation** |
|---|---|
| **NAI** | named area of interest |
| **NET** | not earlier than |
| **NGO** | non-government organization |
| **NLT** | not later than |
| **NUCINT** | nuclear intelligence |
| **OOTW** | operations other than war |
| **OP** | observation post |
| **OPLAN** | operations plan |
| **op O** | operations order |
| **OPCOM** | operational command |
| **OPP** | operation planning process |
| **OPSEC** | operational security |
| **ORBAT** | order of battle |
| **OSINT** | open source intelligence |
| **PIR** | priority intelligence requirement |
| **PRETECHREP** | preliminary technical report |
| **PSO** | peace support operation(s) |
| **PSYOPS** | psychological operations |
| **PW** | prisoner of war |
| **R & S** | reconnaissance and surveillance |
| **RADEXREP** | radar exploitation report |
| **RADINT** | radar intelligence |
| **RECEXREP** | reconnaissance exploitation report |
| **RECPROM** | (NATO) Reconnaissance Programme |
| **RFI** | request for information |
| **REMS** | remotely employed sensor |
| **RI** | relevant information |
| **RPV** | remotely piloted vehicle |
| **RSA** | red situational awareness |

| Acronym | Explanation |
|---|---|
| **SA** | situational awareness |
| **SAR** | synthetic aperture radar |
| **SALUTE** | mnemonic to remember size activity, location, unit, time and equipment |
| **SECINT** | security intelligence |
| **SIGINT** | signals intelligence |
| **SIR** | specific intelligence requirement |
| **SLAR** | side looking airborne radar |
| **SOP** | standing operating procedure |
| **SOR** | specific orders and request |
| **STRATINT** | strategic intelligence |
| **SUPINTREP** | supplementary intelligence report |
| **TA** | target acquisition |
| **TACINT** | tactical intelligence |
| **TACP** | tactical air control party |
| **TAR** | tactical air reconnaissance |
| **TCS** | tactical control station |
| **TAI** | target area of interest |
| **TECHINT** | technical intelligence |
| **TERA** | terrain analysis |
| **TERAP** | terrain analysis product |
| **TO&E** | table of organization and equipment |
| **TOT** | time on target |
| **TPL** | time phase line |
| **TSS** | target selection standard |
| **TTADB** | tactical terrain analysis database |
| **TVA** | target value analysis |
| **UAV** | unmanned aerial vehicle |
| **UTM** | universal transverse mercator |